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# FIELD SERVICE IN WAR

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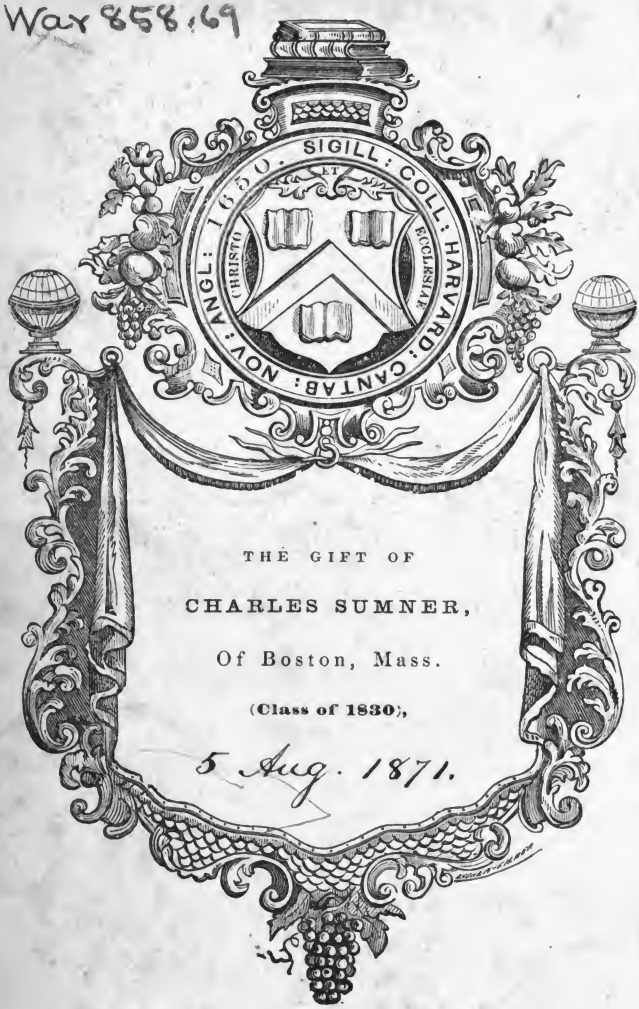


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CHARLES SUMNER,

Of Boston, Mass.

(Class of 1830),

5 Aug. 1871.

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To
Hon Charles Sumner
with the Author's best regard

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# Field Service in War:

COMPRISING

| | |
|---|---|
| Marches, | Convoys, |
| Camps and Cantonments, | Reconnaissances, |
| Outposts, | Foraging, |

AND NOTES ON LOGISTICS.


## By FRANCIS J. LIPPITT,

*Late Colonel 2d California Infantry,*

*Brevet Brigadier General United States Volunteers.*

AUTHOR OF

"TACTICAL USE OF THE THREE ARMS," "INTRENCHMENTS,"
AND "THE SPECIAL OPERATIONS OF WAR."



NEW YORK:
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# FIELD SERVICE IN WAR.

IN every campaign, an army must perform MARCHES; must pitch CAMPS, and sometimes occupy more permanent quarters, or CANTONMENTS; must be guarded against surprise by OUTPOSTS; must receive, from time to time, CONVOYS of supplies; must procure subsistence for its cavalry and artillery horses, and its draught and other baggage animals by FORAGING; and must ascertain the position, strength and movements of the enemy by RECONNAISSANCES.

All these heads, taken together, make up the subject of Field Service in War; which may be defined as comprising *those subsidiary operations and dispositions of an army which are necessarily incidental to a campaign.*

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An Army Corps, or other considerable force will be supposed: but the same principles will apply, with such modifications as will be obvious, to a detachment of any strength whatever.

## MARCHES

are of three kinds:

1. TACTICAL marches, or those made within range of the enemy's cannon, or, at least, within his actual view. These have nothing to do with the present subject, but belong to that of the Tactics of Battle.

2. Ordinary ROUTE marches, where the marching corps is beyond the enemy's reach; and in which, therefore, no precautions need be used against him.

3. Those in which the marching corps is, or may be, so far as is known, within the enemy's reach. It is these last, which have usually some strategic object in view, and may therefore be called STRATEGIC marches, that will be the kind treated of in the present work.

We will consider the subject under the following heads:—PRELIMINARY DISPOSITONS, ORDER OF MARCH, COLUMNS OF MARCH, CONDUCT OF THE MARCH, ADVANCE GUARDS, PATROLS, REAR GUARDS, and TRAINS.

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## I. PRELIMINARY DISPOSITIONS.

1. *Before moving*, the General Commanding should satisfy himself that he is sufficiently provided with reliable guides, and with maps of the country through which he is to march, as full and accurate as can be obtained. He should have the best information he can procure with respect to the resources of the country, and the particular localities where subsistence and forage will be most certainly found; and, what is the most important of all, the position, number, and condition of the enemy's forces. This information will necessarily have a controlling influence upon the direction of the march.

2. He must also satisfy himself by actual personal inspection, or by that of his staff officers, that he has a sufficient amount of ammunition, subsistence, hospital stores, and other necessary *supplies*, as well as sufficient means of *transportation* for the march he is about to make.

3. The activity, mobility, efficiency, and offensive power of an army is usually in inverse ratio to the number of its wheel carriages. The General Commanding, therefore, should take measures to reduce this number to *the lowest possible minimum*, especially when rapid marching is required.

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The means of effecting this reduction will be explained hereafter, in the Notes on Logistics.

4. The proportion of artillery to infantry should not generally be less than two guns for every thousand men. But when this proportion will probably not be wanted, or cannot be used, as where the march is to be through a densely wooded country, we may effect a great reduction in our impedimenta, by taking with us *one gun only* for each thousand men, as was done by Sherman, in his march from Atlanta to Savannah.

5. In field operations, the value of cavalry consists chiefly in its celerity of movement. Though, in a long strategic march, a certain amount of supply and baggage trains may be indispensable, in any special expedition in which rapid marching will be required, no wheel carriages other than those of horse artillery, and ambulances, should be allowed to accompany it. Its supply train should consist in such case, of *pack animals exclusively.*

6. In an an offensive march through the enemy's country, the importance of the services that may be rendered by numerous masses of cavalry on the grand flanks of the army can scarcely be exaggerated. As it is there that cav-

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alry men are chiefly needed, they should not be absorbed by details for orderlies, couriers, &c. For these duties, mounted men and officers *among the infantry* should rather be sought for.

7. In order that the troops may be kept ready for *sudden contingencies* of fighting, or of detached movement, the men should always have two days' rations in their haversacks, and one hundred rounds of ammunition in their boxes and on their persons; and every gun should have with it as many as two hundred rounds.

8. When we are marching so near the enemy that an engagement may come on at any moment, knapsacks and shelter tents had better be *carried in the wagons*, so that the men may be kept as fresh as possible.

## II. ORDER OF MARCH.

1. When the corps marches in a single column, the normal, or usual ORDER OF MARCH is as follows:

(1.) The Advance Guard, (sometimes called the Vanguard.)

(2.) The Main Body.

(3.) The Reserve.

(4.) The Reserve Artillery Trains.

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(5.) General Supply and Baggage Trains.
(6.) The Rear Guard.

2. The *Cavalry* marches mostly behind the Reserve, or, sometimes, behind the Baggage Train; but a detachment of this arm, of greater or less strength, is always in advance of the entire column. And the nature of the ground, combined with other circumstances, sometimes renders it prudent to place the greater part of the cavalry at the head of the column.

3. The *Artillery* is placed in those parts of the column where it will be the safest from attack, and where, at the same time, it may be readily brought into action. Some guns should always march behind the leading infantry battalion, in order to be at hand to cover the formation in case of the enemy being suddenly met with.

When the corps is marching on several roads, the train of reserve artillery should always follow the main or principal road.

Artillery should never form the head or the rear of a column; but should always be covered on the side next the enemy by infantry or by cavalry, to protect it while coming into battery. Indeed, every battery, throughout the column, should have with it a support of infantry or of

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cavalry. An infantry support is usually preferable.

4. In ordinary cases, *regimental ambulances* and *ammunition wagons* should march directly behind their respective regiments; but other regimental trains behind the division, in the order of the regiments themselves. Brigade and division supply trains march behind their respective army corps. Regimental camp equipage should be carried on pack animals; which, when no sudden fighting appears probable, may follow in rear of its respective regiments.

5. *Constant vigilance* will be necessary to prevent the entrance of other vehicles into the column; and a staff officer will have to be sent, from time to time, to inspect the column, and report any violation of the rules prescribed with respect to the trains.

6. The march of a large body of cavalry raises *an immense dust* which may be seen at a great distance. Therefore, when it is important to conceal our march, the mass of the cavalry should be kept, when practicable, at some distance from the main column, on the flank furthest from the enemy; except, however, where this would prevent the cavalry from promptly rejoining the column in case of need.

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On the 29th of August, 1862, to induce Gen. Fitz John Porter to believe that he was in presence of a superior force, and thus prevent him from joining, in compliance with orders, our other corps in the fierce battle then raging near Gainesville, the Confederate General Stuart kept parties of horsemen constantly employed in dragging brush down the road, thereby raising great clouds of dust; such as would be caused by heavy masses of cavalry. The ruse was successful; and Gen. Porter's inaction lost us an important victory.

7. In marching through a *mountainous or thickly wooded country*, the head and rear should always be of infantry, for the better protection of the entire column; infantry being the only arm that can fight on any kind of ground.

8. When very near an enemy in force, all the troops should be *ahead of all wagons*, except such a number of ammunition wagons and ambulances as there will be immediate need of in case of an engagement.

9. To prevent straggling, *each brigade* should have its rear guard, which should permit no one to fall behind, except staff officers and couriers.

10. *In retreating*, the trains lead the march, and must have as many hours start as the safety

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of the column will allow; especially where a river or a defile is to be passed.

In this case, the Advance Guard becomes the Rear Guard, and the Rear Guard the Advance Guard, and the cavalry and light guns should be next the enemy.

### III. COLUMNS OF MARCH.

1. Supplies and baggage must never march on the side *next the enemy*, as this would expose them to capture. Their march must be covered either by troops or by some natural obstacle, as a wide and deep river, or a steep mountain ridge.

2. No one of the three arms should march entirely *isolated from the rest.* They should be at all times ready to co-operate with each other.

In the Italian campaign of 1796, the Austrian General Alvinzi marched with an army of 45,000 men from the Tyrol, down both banks of the Adige, to attack Bonaparte, who was then at or near Verona, with a far inferior force. The mountain path followed by the Austrian infantry being considered impracticable for their artillery and cavalry, these latter arms marched together, on a separate road. The plateau of

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Rivoli was the first point at which the two columns could unite. This plateau was occupied by the French General Joubert with an inconsiderable force. On hearing, at two o'clock in the morning, of Alvinzi's approach, Bonaparte instantly hurried off with the few divisions he had at hand to Joubert's support. The whole of the Austrian infantry had debouched on the plain; but, though far superior in numbers to the French, it was easily held in check till Bonaparte's arrival, not having the support of its artillery and cavalry, which had not yet come up. When these at last approached, ascending by a narrow mountain road, they made the most desperate efforts to debouch on the plain and unite with their infantry, but were constantly driven back, with great loss, by the French artillery; and the Austrian army was completely routed by a French force of half its numbers.

There can scarcely ever be an absolute necessity for marching the three arms in separate columns. Napoleon remarked that it was a mistake to suppose that cavalry cannot pass wherever two infantry soldiers can march abreast. And as to artillery, it would be hard to find a more conclusive example than his own

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celebrated crossing of the Great St. Bernard in 1800, in which his guns, laid in hollowed trunks of trees and dragged by the soldiers, were transported over mule-paths, through deep snows, and down steep icy precipices; the ammunition being put in cases and carried by mules.

3. The Guard nearest the enemy, whether Advance, Flank, or Rear, should consist of *all the three arms*, in order to give it solidity, and enable it to make a stand till the arrival of the main body.

4. In each column, its different corps should keep sufficiently closed to be able to *unite without delay* if the enemy should appear in force.

In the Italian Campaign of 1799, the French, under General Macdonald, lost the battle of the Trebbia, from three of their six divisions being so far in rear as not to be able to arrive in time. The three divisions in front were consequently beaten by Suwarrow's superior numbers, two days in succession.

5. If the enemy be within striking distance, the march of a single column of any considerable depth *on a single road* would be highly dangerous. A vigorous attack on its centre would force it, and expose the two parts of the

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column, thus broken in twain, to be beaten in detail. Again, the column could be easily overwhelmed by a sudden attack on its head or rear, before the different parts would have time to come up in support.

It was thus that Marshal Ney lost the battle of Dennewitz in 1813. He was marching with 50,000 men from Seyda to Juterbock, in one column, on a single road. Although 80,000 of the enemy were near him, and informed of his march by an action the day before, instead of keeping his column as much closed as possible, he allowed an interval of two hours between each of his three corps. On arriving at Dennewitz, Bertrand's corps, consisting of 15,000 men only, which led, was attacked by 40,000 Prussians, who were there waiting to receive them. It was three hours before the next corps, marching over a sandy plain, was able to get up in support, and still later before the third corps could arrive on the ground. As Bertrand's corps had been completely routed, and as 40,000 Swedes and Russians had meanwhile joined the Prussians, nothing but the hardest fighting and Ney's heroic exertions saved the French army from total destruction. As it was, Ney was forced to fall back on the Elbe with the loss of 20 guns and 15,000 men.

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The memorable defeat of the Austrians at Morgarten in Switzerland in 1315 was caused by their being attacked by a party of fifty Swiss in ambush on their left flank, while marching in a single column through a long defile, between the foot of a steep mountain ridge and a lake. The Austrian cavalry, which was leading, being thrown into disorder by the attack, rushed to the rear, trampling down its own infantry.

It is evident that when an army is obliged to march in one column, on a single road, it should be ready at any moment, to wheel into a compact line; that if the enemy be waiting to attack it in front, it should march in as close order as practicable; and that, in neither case, should any gap be left between the different parts of the column.

6. If the enemy be only *in our front*, and we are not compelled to follow a single road, the nearer we approach him, the greater is the number of columns into which the army should be divided, in order to facilitate rapid deployments, and to keep all the parts within mutual supporting distance.

7. Besides the dangers of such a march, it would often be impossible for an army march-



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ing in a single column, on one road, to find subsistence enough for the troops, or forage for the great number of animals which necessarily accompany it. Each corps, then, of an army, and sometimes, even, each of its divisions, marches *on a separate road;* but so disposed as to be able to form line of battle either by itself, or together with the other corps. The distance between the columns should be such that they can all unite in time. They should all have a common Advance Guard, marching on the principal road, and strong enough for vigorous action, and a common Reserve; besides an Advance Guard and a Reserve for each column.

In September, 1862, General McClellan marched his army from Washington in quest of the enemy on five parallel routes; his right, by Leesboro and Brookville to Newmarket; his centre, on roads leading directly from Washington to Frederick; and his left, by roads near the Potomac. He was thus covering both Washington and Baltimore, securing both his flanks from being turned, and ready at the same time, to concentrate promptly at any point in his front. If he had marched his army on any one road, the length of his column, with its trains, would have been fifty miles, one or both of his

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flanks would have been left uncovered, and an attack on his army at his head would inevitably have crushed it in detail.

8. A well disciplined force, of 15,000 or 20,000 men, properly commanded, will usually be able, by rapid intrenching, to hold its ground against even a largely superior force for two or three hours; and if in a strong position, for half a day, or even longer. Columns, therefore, of this strength, may safely march on parallel roads *eight or ten miles apart.*

At the battle of Friedland, Lannes' corps of 26,000 men, in a good position, skilfully commanded, and fighting bravely, held its ground against 75,000 Russians from daylight until noon; when Napoleon arrived with reinforcements.

But if a column of more than 20,000 men be marched on a single road, and the head of the column be attacked, it will usually be impossible for the rear to come up in time to support the front; as, to get into position, its march must diverge considerably to the right or left, and the troops will be too much fagged by their long march to act with vigor immediately on arriving.

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9. Columns may sometimes safely march at a still greater distance from each other than half a day's or even one day's march; as where the enemy's masses are known to be so distant or so scattered, that they cannot make a concentrated attack on either of our columns until it can be joined by the others. All that is required is *that we be able to concentrate* before the enemy can attack us with an equal or superior force.

10. Again, *convergent* marches may be comparatively safe, even when the columns are not within supporting distance; because every day diminishes the danger by diminishing the distance between them. But in divergent marches, the contrary is obviously the case.

11. Not only should the ground between the columns be kept constantly scouted, but we should always, by means of flank detachments and patrols of light troops, occupy a space *around the outer columns* of at least one day's march, in order that we may know of the enemy's position and movements in time.

12. As the columns should be at all times ready to unite, they should have no *insurmountable obstacle between them.*

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In the Italian campaign of 1796, the Austrian army under Wurmser was destroyed by Bonaparte, with a far inferior force, in consequence of two of its principal columns being separated by the Lago di Garda.

From a similar cause, in December, 1800, the Austrian army under the Archduke John, marching in three columns through an extensive forest, was routed by the French under Moreau at Hohenlinden.

So, in 1813, Marshal Macdonald having sent two divisions to capture the little town of Hirschberg, on the river Bober, in Silesia, and having ordered one division to march by one bank of the river, and the other by the opposite bank, the Prussians fell upon one of the divisions, consisting of 6,000 men, during its march, and destroyed or captured the whole of it, in full view of the other division, which could give it no assistance.

13. But the danger of a march in separate columns, with obstacles between them, will obviously be much less where there are frequent *cross roads* between their respective routes; and, in all marches in separate columns, there should be a constant communication between



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them by mounted patrols, which examine the intermediate country.

14. What has been said in regard to the advantages of a march in separate columns must be taken with *this qualification*, that, owing to unforeseen contingencies, or to the want of promptness, or of intelligence on the part of the column commanders, or to their ignorance of the plans of the General Commanding, important combinations often fail; and that there is especial danger of this when the country through which we are marching is not well known. These dangers may sometimes exist in such a degree as to even more than counterbalance those of marching in one column on a single road.

15. The *Orders of March* should specify:

(1). The number of columns, and their respective commanders, and by what road each is to march.

(2). The strength and composition of each column, as also of the general Advance, Flank, and Rear Guards, and their respective commanders.

(3). The hour at which each column is to move. Not only the time of marching, but the time of arrival at the halting place of each

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column for the night should usually be specified. When the march is to execute a definite strategic object, this will be indispensable; and for the slightest departure from the programme in this respect, the column commander should be held to a strict account. But if the column commanders arrive with their commands at the hour and place appointed, they should have full liberty as to the rest; for the exigencies of a march of a separate column cannot be foreseen; and these may differ as to each column.

(4). When, and from what point the Reserve Train is to move, and under the escort of what detachment.

(5). The chief measures of precaution to be taken on the march.

(6). Where the General Commanding is to be found during the march.

(7). Everything that the circumstances require to be provided for; including the general dispositions to be made on meeting the enemy.

16. The Orders of March *should not be published to the troops;* else, they might easily get to the enemy through spies, deserters or prisoners; but only communicated to the corps, division, and brigade commanders.

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17. During the march, *every column commander should know,*

(1). The object in view;

(2). What commanders are next to him on either flank, or in front and in rear;

(3). Who is to reinforce him if attacked; and

(4). On what point he is to fall back, if driven by the enemy.

18. The *column commanders should report,* daily, or from time to time, according to circumstances, not only the appearance of the enemy and particular events, but also their arrival at halting places, and the distance of these from known points on the road.

These, and all other military reports in the field, should be numbered consecutively, so that it may be known at a glance, on the receipt of one report, if any preceding one has miscarried.

19. In a march by separate columns, the General Commanding should be with that one which is expected to be *the first to come in contact with the enemy*; in order that, on meeting him, no time may be lost in making the proper dispositions for battle.

### IV. CONDUCT OF THE MARCH.

1. The column commander should keep himself habitually *at the head of his column*; though,

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when the movements of the enemy are uncertain, his presence may sometimes be more necessary at some other point.

The repeated hesitations, delays, and failures of the Army of the Potomac in 1863, after the battle of Gettysburg, appear to have been caused mainly by our corps commanders not going personally to the front, and contenting themselves with mere reports of the enemy being in force at particular points.

In all cases, on the least sign of an enemy, the chief of the leading division should instantly repair to the threatened point.

2. A *detachment of pioneers* should always precede the Advance Guard, in order to remove obstructions, repair the roads and bridges, and make additional passages in bad places, and thus prevent the column, so far as as possible, from being delayed.

3. In coming into position for battle in the enemy's immediate presence, it is obvious that not a moment must be lost unnecessarily. In such case, therefore, the column will march, when practicable, *directly to the point assigned it*, cutting off all angles, and leaving the highway, whenever the more direct course will be across fields and enclosures. For this purpose,

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a *mounted* detachment of pioneers, in advance, will render important service in moving rapidly to let down fences, fill up ditches, &c.

4. In the column, the three arms should be some two hundred paces apart, so that each one may have *perfect freedom of movement* on the enemy making his appearance.

5. The march should be usually *in open column;* that is, all the subdivisions should keep at full wheeling distance from each other. For

(1). A close column, or a column at half distance, cannot form in line of battle to a flank without a very great loss of time. A march in close column, moreover, is too crowded and exhausting to be long continued.

(2). A column at full distance, if the enemy should appear on either flank, could instantly form in line of battle to oppose him by a mere simultaneous wheel of its subdivisions.

6. But when there is *no danger of an attack in flank*, and it is expected to meet the enemy in front, the column should march closed to half distance, or even in mass, according as such meeting is more or less probable; in order that it may be ready to deploy on its head into line of battle in the shortest possible time.

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7. A considerable corps cannot make, on the average, for any great length of time, more than *ten or twelve miles a day*. In smaller numbers, troops may average fifteen or twenty miles a day. For two or three days only in succession, with good roads, may thirty miles a day be relied on. If the roads be mountainous, or otherwise difficult, these figures must obviously be reduced in proportion.

Troops inured to marching can accomplish far more than those who are not. Napoleon's veterans, accustomed to forced marches, could march forty-five miles in one day, in case of need. Perhaps the most extraordinary forced march ever made was that by General Friant's division, of one hundred and eight miles in forty-eight hours, to take part in the battle of Austerlitz. It arrived on the ground during the night before the battle, and nevertheless distinguished itself the next day by its heroic resistance against fearful odds.

8. A *night march* is always slow, fatiguing, and dangerous, and to cavalry, paralysing. The column should arrive at its halting place, when practicable, two hours before dark; so as to allow the men time to make themselves comfortable for the night, and be better able to act

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vigorously, in case of need, on the morrow. Even veterans cannot be exposed to a night march in bad weather with impunity. Such exposure always places more or less of them on the sick list, especially at the beginning of a march; and in the case of raw troops, the loss of effective strength caused by it is always considerable.

9. Cavalry, marching through woods, must always have *its advance dismounted*, in order to feel for the enemy; else it will be liable to be ambuscaded in a most dangerous position.

In September, 1863, General J. W. Davidson's division was advancing on Little Rock, on the south side of Arkansas River. In marching through the forest, the 10th Illinois Cavalry was at the head of the column. Its advance, of two companies, was mounted, like the rest. Suddenly a murderous fire in flank led to a panic, (for cavalry cannot fight or manœuvre in a forest) which spread to the rear, causing the flight of the whole regiment. Though it was afterwards rallied by the personal exertions of General Davidson, it was not without the loss of two guns and of a considerable number of men. This would not have happened, if the advance had been marching dismounted, as skirmishers.

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10. Whenever the column *halts,* unless it be only for a few minutes' rest, when its patrols may suffice to give the alarm, the forces must be so disposed as to be ready to repel any sudden attack on the troops or on the trains.

At every halt, the animals must be allowed to make the most of their time in pasturing; and whenever the halt is to be for several hours, parties should be sent out to procure forage.

11. A column should never halt *in front of a defile,* but always beyond it; else the enemy may have time to concentrate a force to dispute its passage. And a defile should be passed as rapidly as possible; as troops attacked in one are always in great danger.

12. For obvious reasons, halts *in or near towns or villages* should be avoided as much as possible; especially where the troops are not in a state of high discipline; and we should also avoid passing through or near them on the march.

13. To prevent exhaustion of the men, *the step should never be lengthened* in order to preserve distances. To effect this, the leading battalion should rather step short.

If a battalion cannot keep up, word should be sent to the head of the column, that the step



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may be shortened. Even a company must not "step out," to keep up with the rest of the battalion; though this does not apply to portions of a company, which never must be separated.

There should always be a staff officer at the rear of the column, to bring or send word when the rear is delayed, or cannot keep up.

14. The infantry should habitually keep *on one side* of the road, in order to leave room for cavalry, guns, and vehicles to pass.

15. In passing *muddy spots or streams*, the men must not be allowed to pick their way over, even if they have to be in water up to their middle; but must be made to march in the same order as in a good road. Experience has shown that, unless all the men push straight through, there will be great loss of time. When the column is a very small one, this precaution is not so important; as the delay caused would, in that case, be trifling.

16. If the march of a column must be immediately reversed in order to get into battle, it must be done by a simple *facing about;* and not by a countermarch, which would cause an unnecessary loss of time.

At the battle of Shiloh, Gen. Lew Wallace's division was only five miles in rear of our right,

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where the fight was raging fiercest, and where it was sorely needed. It had been ordered up early in the morning; but, from mistaking the road, it was marching in the wrong direction until one o'clock, p. m., when it was set right. Instead of simply facing the column about, its commander ordered a countermarch; which caused such a loss of time that the division did not arrive on the ground till 7 o'clock, when its services were no longer needed.

17. But, in reversing the column to march into battle, the troops, except the rear guard, must all pass *in front of the trains;* and the ammunition wagons must be placed in advance of all the others.

## V. ADVANCE GUARD.

1. The *functions* of an Advance Guard are four fold:

(1). To serve as a screen for our army and its movements.

(2). To observe the enemy and his dispositions.

(3). Defensively; To protect the main body from attack until it has had time to form and complete its line of battle; and sometimes,

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(4). Offensively; To look for the enemy, and having found him, to initiate the battle and to sustain it until the arrival of the main body.

2. As the two latter are its most important functions, it follows that, while the main body must be near enough for support, there should nevertheless, be distance enough between the two to give the main body *time to take up a position for battle* before the Advance Guard can be driven back upon it. The time required for this depends upon several circumstances; as the depth of the columns, the intervals between them, and the nature and condition of the roads. For a single small detachment 500 yards might be sufficient: while, for a large army, ten or twelve miles, or a half day's march, might be required. A column a mile long could form to the front in fifteen minutes, or less, and its Advance Guard might safely precede it a mile or more.

The Advance Guard of a considerable army should therefore usually be a few miles, but not exceeding half a day's march, in advance of the main body.

3. This distance will not be too great if regard be had only to the defensive function of the Advance Guard, or to the probability of the

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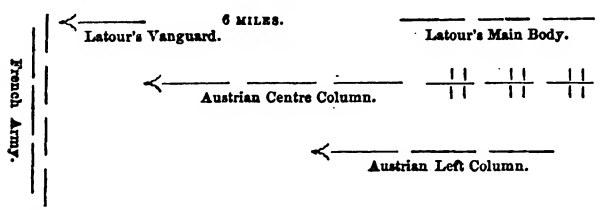
marching corps being itself attacked in front during the march. But where the marching corps is engaged in an offensive operation, and is *about to strike a vigorous blow* at an enemy massed in great force, the rule must be modified. In that case, the great military principle of concentration will govern.

For example, at Hohenlinden, in December, 1800;

*Fig.* 1.




The vanguard of Latour's column of 25,000 men debouched from the forest in advance of the rest of the Austrian army, and made a powerful attack on the French left wing; and would have destroyed it, had its main body, which was six miles behind, on a very boggy and difficult road, been able to arrive in time to support it. The delay gave the French time to reinforce their left, and the Austrians were terribly defeated.

4. Indeed, whenever it is desired to strike a



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sudden and powerful blow, with our whole force, it will be best to march *without any Advance Guard* at all; for, in that case, the use of one would notify the enemy of our approach, and thus tend to defeat our object.

5. The Advance Guard is liable, at any time, to be engaged with an equal or a superior force; or may have to operate offensively in order to mask an attack of the main body on the enemy's flank. It should therefore be composed of *all the three arms*, so as to be able to act effectively on all kinds of ground; and should consist, according to circumstances, of from one-fifth to one-third of the entire force. For instance, if the country be broken, offering everywhere strong positions for defence, one-fifth might suffice; in the contrary case, one-third might not be too large.

In an open country, the proportion of cavalry should be large. In a broken country, there should be a great preponderance of infantry.

6. In order to have the earliest possible notice of the enemy's appearance, and to search all the ground in dangerous proximity, the Advance Guard keeps out *certain small detachments*. These are

(1). The Advance;

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(2). Two Flank Detachments; thrown out one on each flank, to the distance of several hundred yards; or much further, if circumstances require it.

(3). A Rear Detachment, as a rear guard,

These detachments should amount, together, to not over one-half of the Advance Guard; leaving its main body to constitute one-half of its total strength.

7. The Advance Detachment should be of *cavalry* when the ground permits; as this arm can safely keep at a much greater distance in front than infantry, and can carry back information much more rapidly. But in a broken, and especially in a wooded country, it is dangerous to have cavalry at the head, as its repulse would be apt to throw the troops behind it into confusion. This remark, however, does not apply to a few horsemen.

In passing through an extensive forest, infantry patrols, also, replace those of cavalry.

8. The Advance Detachment, according to circumstances, may march half a mile, or even a mile ahead of the main body of the Advance Guard. From this detachment a still smaller one is usually thrown forward a few hundred paces; and this, again, is preceded, one hundred

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paces in advance, by an *apex*, consisting of three mounted men, or of a staff officer, with a few horsemen.

9. The Flank Detachments throw out from their flanks a few men called *flankers*, who patrol outside of their detachments at the distance of two hundred yards or more, according to the ground.

10. The Advance and Flank Detachments must keep at such distances from the main body of the Advance Guard, as *to prevent the enemy's approach*, unperceived, in front or in flank; and at the same time, be within supporting distance of each other.

11. On approaching the enemy, the different parts of the Advance Guard *close in to their main body*; so as to be ready to debouch in full force, with the support of cavalry and artillery.

12. Not only the Advance Guard, but *the main body of the marching force* has out also its Advance, Flank, and Rear Detachments; except when the column has so little depth, and the Advance, Guard is near to it that these precautions are unnecessary for its safety.

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### VI. DUTIES OF THE ADVANCE GUARD.

1. It must use every precaution to prevent the enemy's *gaining information of our force* or of our movements.

2. When opportunity offers, it should perform the duty of *a partisan corps*, in keeping the enemy constantly occupied, and in harassing him by frequent alarms; so as to make him use fatiguing precautions to secure his flanks and rear, while our own main force is kept fresh.

3. For its *camps*, it must choose positions from which it can watch the enemy, and still be in concealment, and not exposed to a sudden attack in front or flank.

4. The Advance and Flank Detachments must sharply *observe all that occurs* around them.

5. The *strictest order* is required, especially in the Advance Detachment. Nothing should be allowed which might divert their attention from watching, or which might make their approach known to the enemy. No fire-arm should be discharged, except in case of absolute necessity.

6. The Advance sends forward scouts to *examine defiles;* which should be so occupied by detachments of the Advance Guard as to secure them until the main column gets up.

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When the Advance has passed a bridge or other defile, it sends forward cavalry patrols to a considerable distance in front, before the main body of the Advance Guard begins to enter it; for a defile is a most dangerous place for a corps to be attacked in.*

But when the ground in front of the defile is wooded, or rugged and mountainous, it is infantry patrols that must be sent out. Some infantry, therefore, should always be near the head of a column. These patrols ascend the neighboring heights, and remain there watching, until relieved by patrols from the Rear Detachment of the Advance Guard. The cavalry, and the train of the main column halt in rear of the defile until it has been occupied.

7. If the Advance Detachment come to a bridge that has been burned or made impassable, or to an unfordable stream, it must immediately send back to *report the fact*, so that the pontoons may be brought up without delay.

8. Whenever the Advance Guard *halts*, the men at the apex should ascend any height that may be within four or five hundred yards. In approaching the top, the leading man, with his cap off, creeps cautiously up till he can look over it.

*As to the Defence of Defiles, see "Special Operations of War."

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9. *Woods*, when it is practicable, should be ridden round by horse before the main body of the Advance Guard passes through them. If the wood be too extensive for this, it should be examined for two hundred paces or more on each side of the road.

10. All *doubtful ground* must be searched by the leading or flank detachments before any large body comes within range of it.

### On meeting the enemy.

11. Whenever the enemy is *reported in sight*, the commander of the Advance Guard instantly goes to reconnoitre his position and numbers.

12. If the Advance Guard be compelled to fall back before a superior force, it should not retreat directly on the main corps; for this might throw it into confusion, or at least disturb its formation. It should rather take up a position that will both unmask the main corps, and enable the Advance Guard itself to *threaten the advancing enemy in flank.*

13. But it should always resist long enough *to allow the main corps to come up*, or to make its dispositions for battle. For this purpose, it should at once take up a strong position, and hold it obstinately. If this is impracticable, it

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should retire as slowly as possible; seizing every opportunity of checking the enemy's advance.

14. On meeting the enemy suddenly, unless he be evidently in too great force, the Advance Guard should *attack him immediately.* By so doing, we should have all the chances in our favor, even against superior numbers; as it may be reasonably presumed that he was no more aware of our approach than we were of his.

15. So, even if the enemy be met in superior force, if he be *not formed for battle,* the Advance Guard should at once charge impetuously, so as to confuse him and hinder his formation.

The noble Theban, Pelopidas, suddenly fell in with a Spartan force of double his numbers. One of his men rushed up, crying out "We have fallen into the midst of the enemy!" "Say, rather," said Pelopidas, "the enemy has fallen into the midst of *us*!" He immediately attacked and routed them; and it was this defeat which first broke the Spartan prestige of invincibility.

16. For *the Advance Detachment,* on meeting the enemy, the most prudent course is to deploy a part of it as skirmishers, keeping the rest in reserve. In broken ground, the skirmishers may be kept far ahead, and the reserve held

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back. As the ground opens, concentrate. If there are guns at hand, plant them so as to sweep the approaches. In this order the detachment may fall back on its main body.

17. If reconnoitering *parties of hostile cavalry* make their appearance, they should be pursued at once, and, if possible, captured or destroyed. If, from their numbers, their object appears to be to attack or to harass the column, they should be dispersed immediately. To effect this, promptly unlimber a few guns, and play upon them with canister or with shell, according to their distance.

18. On approaching a stream, if there be a hostile force on the other side, lose no time in bringing up some guns of suitable calibre, and in planting them so as to cover the crossing, in case it should be opposed.*

### VII. FLANK AND OTHER PATROLS.

1. Patrols should be kept out *on the flanks of the main column;* especially on that side on which the enemy is supposed to be. These Patrols have, likewise, each its advance party, whenever they are beyond supporting distance from the column.

*As to the Passage of Rivers See "Special Operations of War."



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2. These Patrols always keep out two or more *patrollers* at some distance beyond their flanks. They keep up with the head of the main column, and watch all lateral defiles and woods by which it may be attacked, till the column is beyond danger.

3. It is *the duty of these and of all Patrols*, (which should be of cavalry when the ground permits),

(1). To keep as much scattered as possible.

(2). If attacked, to check the enemy's advance as long as possible; retiring fighting, on their supports.

(3). On a height being seen, to approach the top to look over it with the same precautions that are observed by the apex of the Advance Guard, as already explained.

(4). Never to fire on seeing the enemy, unless driven in, and there be no time to send a report; for the enemy may not have seen *them*. They should retire silently.

(5). To secure the column against sudden attack, by choosing commanding positions for observation whenever the column makes a halt. The Patrols halt in marching order, and facing outwards, so as to see in every direction at once.

4. A cavalry patrol, or other cavalry *can seldom honorably surrender*, unless surrounded

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by a greatly superior force. If suddenly attacked, an instantaneous and determined charge through the enemy will usually result in the escape of the greater part, if not of the whole.

### VIII. REAR GUARD.

1. Of a Rear Guard *in a retreat*, the task is very difficult; but its duties in such an emergency belong rather to the head of the Tactics of Combat. Its duties in an offensive march, which is the case now supposed, are comparatively light and easy. They consist chiefly in covering the trains, and in bringing up stragglers.

2. It should keep *flank patrols* pushed out as far as is safe, in order to be warned in time of any appearance of a design to attack, or to cut it off.

3. When threatened with an attack, it should be covered by *a line of skirmishers*; supported, if the occasion require, by other arms; which line, if driven in, should rally on the flanks, leaving the road clear for the action of our cavalry, infantry or guns.

4. To make the trains as safe as possible, troops of the Rear Guard should march *on both flanks* of them, as well as in their rear.

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5. A Rear Guard of *cavalry alone*, separated from the column by the baggage, is exposed to destruction. A battalion of infantry, with some guns, is not in so much danger; as it can keep the enemy at a distance by its fire, is not liable, like cavalry, to be thrown in disorder among the trains, and can fight on any kind of ground.

6. The Advance and Rear Guards *should alternate at regular periods* of one day or more, according to the depth of the column. The duties of a Rear Guard, encumbered with the charge of the wagons, are usually very irksome, and often laborious; as, when the roads are bad, the men have to be constantly assisting in lightening the wagons, and in drawing them out when mired. It should be observed, by the way, that the men of the Advance Guard are also employed, when needed, in helping the engineer troops to repair roads, rebuild bridges, and remove obstructions.

## IX. TRAINS

Comprise all kinds of vehicles and pack animals used in the transportation of baggage, supplies and munitions of war. Besides the ordinary trains there are Siege Trains, Pontoon Trains, and Trains of Reserve Artillery.

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1. Before commencing a dangerous march, or one that will require very rapid movements, all wagons, pack trains, and supplies of every description, not absolutely indispensable, should be *sent back to our base*, or to some secure depot.

2. *Very long trains* are to be avoided. They require a large number of troops to guard them, are easily surprised, and, if attacked, can rarely be effectually defended. They are always attended with more or less confusion, and their proper organization requires a vast deal of time and labor.

3. The trains belonging to a *brigade* are usually consolidated, and march in one body behind their brigade.

4. In a *single column*, consisting of several brigades, all the brigade trains may be united, and march together. In this case, the safest place will be in the rear part of the whole column, in front of the Rear Guard.

5. When the army is marching in *several columns*, all the trains should be united in one, (but leaving with their respective brigades those carrying articles for immediate use,) and placed in rear of that column which is most remote



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from the enemy; or else, on a separate road by themselves, on the flank furthest from the enemy.

6. If it is expected to meet the enemy, and *both flanks of the army are exposed,* keep all the trains not of urgent necessity in rear of the central column, at the distance of half a day's march behind it, so as not to impede a retreat; during which the trains should always keep at this distance ahead.

7. When an object of *urgent necessity* is at stake, in order to accelerate the march, the trains may be sent by another route, or even be abandoned altogether.

8. When the roads are very bad and rapid marching is important, as, in pursuit of a beaten enemy, we may accelerate the march by using *extra teams* for our artillery and ammunition carriages.

9. A train has always *an escort* in front, or in rear of it, or both, according to circumstances; and sometimes one on the flank towards the enemy; from which flank patrollers are kept out.

10. It is of the utmost importance, in order to prevent mistakes and confusion, which might be fatal in case of a rapid retreat, and also that each corps may rely on having its necessary

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supplies always on hand, that the *most minute and detailed orders* should be given and obeyed in relation to the march of the trains.

11. Trains are divided into three classes:

(1). Those which may be needed *during the march*; comprising ambulances for the wounded, with surgical instruments and appliances, cooking utensils, ammunition wagons, spare artillery carriages, and pontoon wagons, when expected to be used.

These should be behind their respective brigades or regiments.

(2). Supplies and articles needed *in camp*, as, provisions and forage for immediate distribution, papers and records, camp equipage and intrenching tools, money, medicines, field forges, artillery wagons, staff baggage wagons, pack animals of field and company officers, sutlers' wagons.

These march behind the division, or the army corps to which they belong, between the main body and the rear guard of their respective columns.

(3). Supplies for which there is *no present necessity;* as, general provision wagons and forage, hospital stores and equipments, ambulances for the sick, pontoon trains, when not

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expected to be used, and the train of reserve artillery.

All these march on the principal route, or in rear of the principal column.

When a battle is expected, the third class trains, and such part of the second class trains as can be spared, should keep at half a day's march behind the main body.

12. Wagons *containing loose powder* should march by themselves. No other articles should ever be placed on them. They should always be the furthest from the enemy, to secure them from capture and explosion by his missiles.

13. Large trains are divided into *sections* of one hundred wagons each, marching at one-third of a mile apart. The head of each section should halt whenever it is necessary to enable the rear to close up.

14. Trains should always keep *on the right of the road,* so as to afford a free passage by them for troops in case of emergency. In a forced march to battle, all trains that may hinder the march of troops must be immediately stopped, turned out of the road, and either sent at once to the rear, or parked facing to the rear, ready to move off at a moment's warning, according to circumstances.

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15. Most of the employees connected with transportation trains in our service, have hitherto been civilians hired by the Quartermaster's Department. It would be a great improvement to require them all to be enlisted soldiers, and to give to this branch of the service *a military organization*, like the others. For

(1). By the introduction of strict military discipline and responsibility, the prompt and complete execution of all orders would be ensured. This would prevent, in great measure, those disappointments and delays which so often cause the failure of the best planned military movements; to say nothing of those dangerous panics which citizen teamsters and drivers are liable to create during a battle.

At the battle of Malvern Hill, in July, 1862, the hired teamsters of one of our batteries ran away in the dark with their teams. The guns and carriages would have been lost, but for the extraordinary exertions of the First Connecticut Foot Artillery, which succeeded in dragging them away by hand some three miles over almost impracticable roads.

(2). By means of wagon-train drills, as now used in the French army, in which the drivers and their teams are practised in all the opera-

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tions and movements that may become necessary in the field, the duties of this branch of the service would be performed with much greater skill and efficiency.

(3). These enlisted men would often prove a valuable reinforcement in garrison or in the field. At the battle of Nashville, in December, 1864, our inner line of works, covering the city of Nashville, was held by a quasi-military organization of 5000 men belonging to the Quartermaster Department, under the Chief Quartermaster of the Department of the Cumberland.

(4). The expense to the government would be far less than under the present system.

When Buonaparte was made First Consul, the French artillery drivers were hired citizens; and from this cause, the artillery was unreliable and inefficient. Buonaparte immediately changed the sytem by making them all soldiers; and the French artillery soon became the terror of Europe.

16. Of *the danger of disregarding established principles* concerning the march of columns, every war has furnished more or less of examples. Two will be cited from our late war of the Rebellion.

In April, 1864, a column of 22,000 men, under General Banks, was marching upon Shreveport,

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Louisiana. The actual direction of the column appears to have been left to General Franklin, the next in command. The entire column was marching through a thick pine forest on a single road, too narrow, except in occasional open spots, to admit of the passage of two carriages abreast. The Advance Guard consisted of a cavalry force of 3,500 men. Following this came the cavalry supply and baggage train, over two miles long, loaded with ten days' rations and forage. The artillery was in front of the wagon train. Seven miles behind the cavalry marched the Thirteenth Corps, and some eight miles in rear of this was the Nineteenth Corps; the entire column being about twenty four miles deep.

On attempting to debouch upon some open ground near Sabine Cross Roads, the cavalry was suddenly attacked by Confederate infantry, not only in front, but on each flank. Being in no condition to deploy or to fight, it was soon driven back upon its immense train, which stood blocking up the road within less than a mile of the enemy. A reinforcement of two infantry brigades, at the first alarm, had been sent forward from the Thirteenth Corps; but arriving too late, and overborne by the

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mixed mass of rushing teams and fugitive horsemen, it was soon driven back with the rest. The entire Thirteenth Corps was unable to stem the torrent. The rout continued for twelve miles; when the flying column came up with the Nineteenth Corps, which had taken up a strong position on some heights near the road. After opening its lines to allow the fugitive mass to pass through them, this corps stoutly held its ground, and was beginning even to act offensively, when the enemy withdrew under cover of the darkness.

The accounts as to the extent of our loss are conflicting; but it would appear to include, besides killed and wounded, that of the entire cavalry train, some two or three batteries, and twenty-five hundred prisoners. The Confederate force was about equal to our own.

17. The *errors* that led to this disaster were as follows:

(1.) Assuming that there was no other practicable route than this single road through a dense forest in the heart of the enemy's country, the extreme danger of such a march by a large force should have prompted such an order of march as would be most conducive to its safety in case of a sudden attack. But the dif-

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ferent parts of the column were too distant from each other for mutual effective support. The rear was a whole day's march from the front.

(2). On such a road, it was a gross violation of military rules and of common sense, to place at the head of the column a large cavalry force, which, if suddenly attacked, could neither deploy nor fight, nor in fact, do anything else but fall back, and thus throw every thing behind it into confusion. The action of cavalry being necessarily paralysed by a march through a forest, its proper place was in the rear of the entire column, where, if it could do no good, it could at least do no harm. A few mounted orderlies could have been left without danger near the head of the column, to carry information and orders.

If the Advance Guard had been of infantry, carefully feeling the ground by skirmishers in front and on both flanks, the main body, no matter how sudden the attack, would have been in a condition to resist it. The enemy's attack could be only with infantry, with which our own infantry would have engaged at least on equal terms, until by obstinate fighting and by manœuvring, we should compel him to withdraw.



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(3). The artillery of the Advance Guard being wedged in between the cavalry and the wagon train, it is no wonder that it was all captured. In a long column, especially on a road through a forest, two or three guns should be near the head of the column; but the rest should be scattered, at intervals, throughout the column. This would protect them from capture, while they would be at hand for effective use whenever the ground would permit, and at whatever point the attack might be made.

(4). It was another gross violation of established principles to allow a baggage train to march in front of the main column.

For, First, It was thereby exposed to capture.

Secondly, In case of the cavalry advance being driven back, by its blocking of the road, it must inevitably convert what might have been an orderly retreat into panic, disorganization and confusion.

Thirdly, In such a position, it virtually constituted an insurmountable obstacle, cutting off the Advance Guard from all effective support from the main column.

Finally, The cavalry needed no wagon train at all. Its supplies and baggage could have been packed on mules. And, apart from this,

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its train, of whatever consisting, was not needed at the head of the column at all. The troopers could easily have carried with them in their haversacks three or four days' rations, and nose-bags containing one day's forage. Squads of men could have been daily sent back for more; or else, a certain number of forage mules could have been driven up every night to refill the nose-bags.

(5). Half the wagons, it is said, were filled with trunks, chairs, valises, and other cumbersome baggage. If this be true, the officer who permitted so outrageous an abuse was clearly unfit to be entrusted with any command in time of war.

18. *Another and most disgraceful instance* is the rout of a column of 5,000 infantry, some 3,500 cavalry, and four batteries, under General Sturges, by an equal Confederate force near Guntown, Mississippi, in June, 1864. The column was marching on a single road, the cavalry in front, unsupported by infantry, or (as would appear) by guns, the three infantry brigades being scattered along the road some eight miles in rear; and, as if this order of march was not dangerous enough, a train of two hundred and fifty wagons was allowed to block the

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road in rear of the cavalry. On the head of the column being suddenly engaged, the infantry was ordered up; but owing to the blocked and otherwise bad condition of the road, it was some hours before the leading brigade could get up; and, arriving exhausted and disorganized, it could do nothing to restore the day; for the cavalry was now falling back in disorder. As each brigade got up only in time to find the force preceding it already beaten, the rout soon became general. It was a rush of panic stricken men and horses over a narrow road choked up with wagons, draught animals and artillery. The retreat continued all the way back to Memphis, a distance of one hundred miles. Our dead and wounded, as well as the entire wagon train, were left on the ground; and besides a heavy loss in men, the enemy captured all our artillery and ammunition, ambulances, commissary stores, hospital supplies and officers' baggage.

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# CAMPS AND CANTONMENTS.

## I. CAMPS.

1. The rules for the *choice of a camp ground* are as follows:

(1). The camp should be near good water; if possible, a running stream, for drinking, washing, bathing, and general cleanliness.

(2). It should be near to woods; for the supply of fuel, for shelters, for repairs of material, and for works of defence.

(3). The site should be healthy, and the ground dry and commodious; which, in this view, should slope more or less.

(4). It should be near good roads, or other communications for the transport of supplies.

(5). It should be favorably situated for defence; not exposed to be ~~an~~ enfiladed or commanded from any point within long cannon range; but, if possible, it should itself command all the neighboring ground.

(6). The communications in rear should offer an easy retreat, but no facilities to the enemy to attack on that side.



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Where the camp is to remain for only a day or two, some of these requisites are obviously not essential.

2. On approaching the camping ground, the division or brigade which is to lead the next day marches on and *encamps in advance* of the others; so that there may be no loss of time in the morning.

3. When encamped, as at all other times, troops must be *advantageously posted*, with flanks secure, or supported. Guns must be so placed as to command every avenue of approach. All parts of the force, and all arms must be ready to support each other.

It was a maxim of Napoleon, that an army should be every day, and at all hours, day and night, in readiness to fight, and to make all the resistance it is capable of.

Therefore, a camp, whether in tents or in bivouac, must be so arranged that its several parts, and also the different arms, shall be in their order of battle; and the extent of the color front should never exceed that of the line of battle. Guns behind the infantry should be kept limbered up; those in front always unlimbered, and ready to fire.

4. To *camping in line of battle* there are two objections:

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First, that the taking up of a long and difficult formation requires much time.

Secondly, that this order of camping, though best for defence, is generally unfavorable for a prompt taking of the offensive.

The former of these objections is admitted to apply with conclusive force in the case of a large army, which must usually camp in the same order in which it marches.

As to the latter objection; a defensive order is the most suitable one for troops in camp, and should be used whenever the force is not so considerable as to lead to any great loss of time in taking it up. But, to enable the encamped corps to pass promptly to the offensive, the line of battle may consist of double columns at half distance, with the arms left stacked in column. In this order, moreover, if suddenly attacked by cavalry, the troops could instantly form in squares. The bivouac fires and the shelters might be on the flanks of their respective battalions. The columns might be camped at deploying intervals, or with intervals closed, according as the ground and other circumstances may render advisable.

5. Trains and animals should be parked on the side *the most secure from the enemy.* The

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panic in the Eleventh Corps which led to our defeat at Chancellorsville, is said to have been commenced by a stampede of the teams and beef cattle, which had been left uncovered by troops, and which, on the enemy's sudden appearance, rushed over the field, driving the men before them.

6. From published statements, it would appear that our force at Shiloh, in April 1862, had no Advance Guard; that it was encamped in such a manner as to make a prompt formation of the troops in line of battle impossible; that on the side towards the enemy, several brigades had their battalions camped in utter confusion, in some places, crowded behind each other, in others, with considerable gaps between them; that different portions of the same division were scattered miles apart; that our extreme left, which was towards the enemy, was commanded in some places by unguarded heights, and, in others, by woods, which our troops had neglected to occupy; that, to compensate for these deficiencies, we had no defences thrown up, not even an epaulement for a battery. If all this, or half of it be true, *the panic and the driving of our troops* on the first day of the battle *are fully accounted for.*

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7. When, from any cause, our outposts cannot be relied upon to protect the main body from a surprise attack, we should add to our security by *throwing up such defences as may be most conveniently used.* But generally, when not threatened by a superior force, intrenching should be avoided; as it shows timidity, and is apt to cramp our movements in battle. Raw troops, especially, are not over willing to leave intrenchments, and are but too ready to return to them.

8. A small camp, much more than a large one, is exposed to surprise in a dark or foggy night. In such a case, the commander should not attempt to form the troops in the camp itself, but should rally them in some by-place *out* of *sight.* In our war of Independence, General Wayne was encamped with 1,200 men one dark night in November, 1777, near Paoli's Tavern, Pennsylvania. Suddenly attacked by a British force, he attempted to form his men by the camp fires; thereby making them an easy target for the enemy's volleys. After 300 of them had been shot down, the rest fled in confusion, and succeeded in making their escape under cover of the darkness.

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9. When encamped within ear-shot of the enemy, the troops must not be roused by *drums*, *bugles*, or *loud commands*.

10. The instant the brigade, division, or army corps head-quarters are fixed, *their exact locality* should be reported to the next superior headquarters. A neglect of this precaution during our late war often led to great loss of time in the conveyance of orders, resulting sometimes in disaster.

## II. CANTONMENTS.

1. Before the troops go into Cantonments, (which are permanent camps), *good military positions* for them should be selected, after a careful reconnaissance.

2. In the choice of these positions, greater care is necessary in respect to the *health and comfort* of the men than in the case of a temporary camp.

3. Cantonments should be made as *secure against sudden attack* as possible, by intrenchments, lines of abatis, inundations, or other suitable defences.

4. In winter quarters, troops must usually be much scattered for subsistence. *Arrangements for guard*, therefore, require great care. Chains

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of advanced posts should be constantly kept up several miles distant from camp, and supported by intermediate detachments; and the country around should be constantly scoured by cavalry patrols.

5. Cantonments should be in rear of *a good line of defence.*

If the line of defence be a river, several points should be chosen for crossings which, should all be secured by bridge-heads on both sides of the river; to enable the troops more effectually to repulse an attack, and to promptly pass to the offensive, in case of need.*

6. A strong military position should be fixed upon as *a point of concentration,* where the different corps are to unite if the enemy should suddenly take the offensive. This position should be in rear of the cantonments; so that the enemy may not, by possessing himself of it, be able to beat the divisions separately as they come up; as was done by the Imperialists at Marienthal in 1645, Turenne having fixed his point of concentration six miles in front, on the road towards the enemy. On this occasion, all Turenne's skill, desperate personal exposure, and the brave fighting and superior numbers of

*See a Treatise on Intrenchments. Art. Bridge-heads.

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his troops could not save them from being totally routed.

It would be still worse to have no point of concentration fixed at all; as was the case in 1841, when the British divisions in cantonments were successively destroyed by the Affghans.

7. The advanced posts of cantonments should consist chiefly of *light cavalry,* instead of infantry. This kind of force can reconnoitre better at a distance, and can more rapidly concentrate from remote points to oppose the enemy's advanced troops, which are, usually, mostly of cavalry themselves.

8. It is imprudent to keep troops cantoned *in towns or villages.* Experience has shown that when troops are thus cantoned, there is generally great delay in assembling the different corps at their respective rendezvous. In the French campaign in Poland, in 1807, as soon as the season arrived in which military operations became possible, Napoleon brought out his troops from the villages, and encamped them by divisions, which were covered by earthworks and abatis; thus enabling them to defend themselves until reinforced. It was well that he did so; for otherwise, the Russian army, which suddenly

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concentrated and fell upon Ney's corps, the French Advance Guard, and drove it back with loss, would probably have inflicted on the French army a great disaster; instead of being unexpectedly stopped and driven back in its turn, through the rapid concentration of all the French corps.



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## OUTPOSTS

will be treated of under the following heads:

I. GENERALLY.

II. GRAND GUARDS, AND DUTIES OF A GRAND GUARD COMMANDER.

III. PICKETS.

IV. DUTIES OF PICKETS.

V. SENTINELS.

VI. PATROLS.

VII. DUTIES OF THE COMMANDER OF THE OUTPOSTS.

### I. GENERALLY.

1. The *objects* of outposts are

(1). To guard the army in camp from surprise, and, in case of attack, to give it time to form.

(2). To observe, so far as possible, the numbers, dispositions, and movements of the enemy.

(3). To screen our own position, numbers, and movements from his view.

These objects are effected by means of several concentric chains of guards surrounding the camp, and of patrols; all under the com-

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mand of an officer designated by tour as Commander of the Outposts.

2. Our system of outposts has been derived partly from the English, and partly from the French. The introduction of terms from both these services has led to some *confusion in our outpost nomenclature.* I shall adopt such terms as seem most agreeable to principle, and the most general military usage.

3. The chains of guards are usually *three in number:* (*Fig.* 2.)

(1). The outer chain consists of Sentinels, Cavalry sentinels are called Vedettes.

(2.). Considering the chain of sentinels as a line of deployed skirmishers, the next line consists of their supports. These are small detachments, properly called Pickets.

(3). These, supports, or Pickets have for their reserves the inner chain, called Grand Guards.

Sometimes, between the line of Pickets and the line of Sentinels, another chain is established, consisting of petty detachments of six men, more or less. This intermediate chain is sometimes called "outposts." But as the term Outposts is applied to all the parts collectively, to prevent ambiguity it is better to call these

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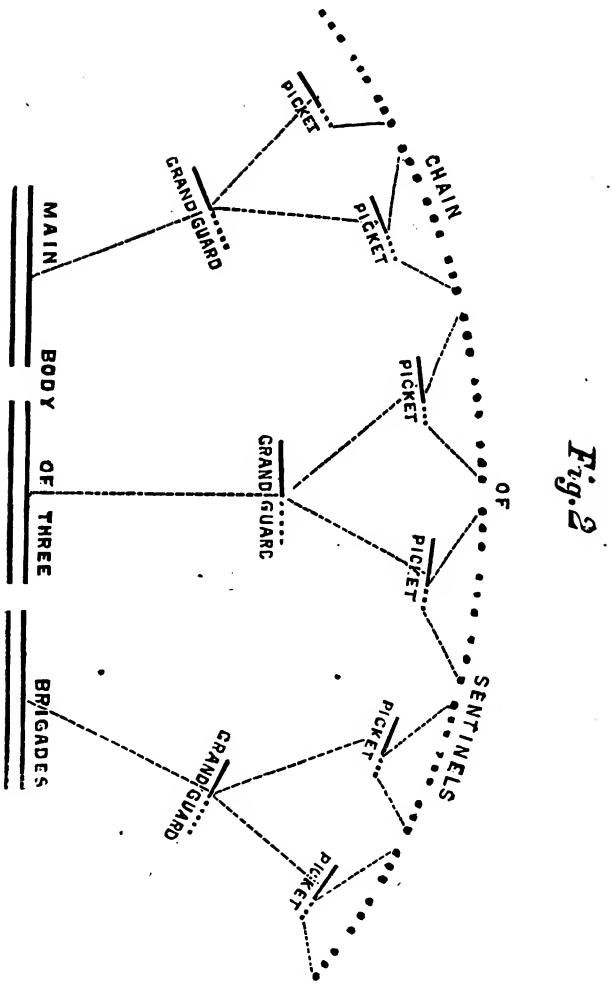


Fig. 2



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detachments Small Posts, or Petty Posts.

4. The Outposts unit is usually a brigade, as indicated in Figure 2. But where the brigades are small, or where the main body consists of several divisions, *an entire division* is often designated for the performance of outpost duty. In that case, the diagram, in which three brigades are supposed to constitute the entire main body to be guarded, will indicate how the outpost duty would regularly be performed by an Outposts division of three brigades.

5. Not only three, but as many, even, as six or seven chains of outposts have been occasionally used. To this practice there are *two objections :*

(1). It robs too many of the nightly repose necessary to troops undergoing the exhausting fatigues of a campaign.

(2). It gives no additional security. Whatever be the number of chains used, it is on the vigilance of the outer one that the safety of the army mainly depends. The greater the number of chains, the less is the responsibility felt by the inner ones, and the more, therefore, will they relax in their precautions. The Grand Guards, especially, on whose prompt resistance the army relies to give it time to form, will

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hardly realize the necessity of being always on the alert, with so many chains beyond them to give the alarm, and afford them time to prepare.

6. *The three chains* that have been mentioned are all that are strictly essential; that is,

(1). Sentinels, to guard the camp against the entrance of all persons except those known to be friends; and also to watch the enemy, and give warning of his approach.

(2). Pickets, for the sentinels to retire upon, and to delay the enemy until the Grand Guard can come up.

(3). A Grand Guard, to hold the enemy in check, until the main body has had time to form.

7. When we are in momentary expectation of being engaged, there may be no time to establish regular outpost chains. In such a case, a *line of skirmishers*, well out, with strong supports, may suffice; as during the advance of the Tenth Corps towards Drury's Bluff in 1864; where, encamping in its order of march, its outposts consisted of a line of skirmishers, deployed at three paces intervals, covered, in some places, by slight breastworks or trees; all kept alert and ready, no man or officer being allowed to sleep.

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And, on the other hand, if a sudden advance is to be made on the enemy, the entire line of sentinels, pickets, and grand guards may be kept in front; thus transformed into a complete system of skirmishers. In this manner we repeatedly marched to battle in the late war.

8. Normally, *each brigade* has its own complete system of outposts, furnishing two or more companies for its Grand Guard; which, again, furnishes the Pickets; which, in their turn, send out the Sentinels. When the danger of attack is imminent, the strength of the Grand Guards may be doubled.

A Grand Guard of two companies would keep one company in reserve as the Grand Guard proper, sending out one company to constitute two Pickets, of one platoon each; each Picket posting a certain proportion of its number (usually one-third) as Sentinels, whom it relieves every two hours, or oftener, if circumstances require.

These dispositions are indicated in Figure 2; showing one-half of the Grand Guard to be detached as Pickets; and one-third of each Picket posted as Sentinels.

9. When troops are encamped in any considerable force, in addition to the Grand Guards in

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front, *the flank brigades* also throw out Grand Guards on the flanks of the army.

10. When circumstances make it advisable to post the Grand Guards at much greater than the usual distance, another detachment, consisting of several companies, a battalion, or it may be, even a whole brigade, is posted at some central point intermediate between the Grand Guard and the main body. This is the *Reserve of the Outposts;* and, together with the outposts of all the brigades of the division or corps, is under the Commander of the Outposts.

11. The General Commanding, or the Commander of the Advance Guard, as the case may be, issues an order for the establishment of the outposts; detailing the particular regiments or corps, as also the detachments of the three arms (when such are required) designed for this duty; directing generally as to where the line of sentinels shall be posted, and as to the points between which, or in what direction, patrols are to be sent out. *On this basis,* the Commander of the Outposts makes his assignments.

12. On first taking up their positions, the Outpost troops march to their posts *with the usual precautions;* that is, with advanced,

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flank, and rear patrols; for the enemy may be come upon unawares.

The entire main body remains under arms till the posts are properly established, ready to act if the enemy should suddenly make his appearance.

13. Outposts must be so disposed as to *cover all the avenues* by which the enemy may approach, in front, or in flank.

14. The Grand Guards occupy the principal avenues *leading from the interior to their respective Pickets*, which they support if attacked, and receive if driven in.

15. *Patrols* complete the system; moving between the Grand Guards and the Pickets, and between the Pickets and the Sentinels; and searching all the ground in front not seen by the Sentinels.

16. Whenever *a vigorous defence* is required, the Outposts should consist of troops of the three arms.

**In Cantonments,**

17. Outposts should be much stronger, *and pushed out much further* than in the the case of troops, on the field, and posted on ground favorable to a strong resistance; which should be strengthened moreover by entrenchments. Their tour of duty, instead of being for

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twenty-four hours only, will need to be of several days, or sometimes much longer.

They should consist, usually, of Light Cavalry. But in a woody district, cavalry outposts, to protect them against sharp shooters, should be supported by infantry.

18. The *requisites* of a good system of outposts for Cantonments are,

(1). Picket stations, commanding a view at distance; with a line of supports, posted on strong ground in rear.

(2). Telegraphic signal stations, communicating with the main body.

(3). Easy communications for concentration on the main body.

(4.) Patrols kept constantly moving along the front, flanks, and if possible, rear of the enemy, to get wind of his strategic plans.

19. No corps should stay long enough in a town or village to *become domesticated*; for this gets troops into habits of ease and negligence.

20. When the field of operations is of considerable extent, the ordinary outposts will not suffice for the complete protection of the army in cantonments. An *Advance Guard* should be kept cantoned at the distance of at least one

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day's march in front, to watch the enemy, and receive the first shock of his attack, in case of his sudden concentration.

This Advance Guard should be strongly entrenched, and should always consist of the three arms; though a cavalry force alone has been known to perform this duty successfully. In November, 1864, General Hatch, with his division of cavalry, for nearly a month observed Hood's army at Florence, keeping up a line of outposts fifty miles in extent; using his force so judiciously that the enemy made no move without our knowledge, and giving us the first notice of his advance northward; and all this without serious loss.

### II. GRAND GUARDS.

1. It has been the usual practice to make details for this duty, of men from different companies or battalions; but experience has shown that it is better to take *one entire company*, or several companies, or an entire battalion for this service. For

(1). The esprit de corps, in such cases, causes the duty to be better performed.

(2). The men being comrades, their mutual support is given with more alacrity and zeal.

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(3). The men being all personally known to the officers, discipline is better enforced.

2. The *tour* is usually of twenty-four hours; but circumstances may prevent a Grand Guard from being relieved for two or three days.

3. Being the supports of the Pickets, they should be posted, usually, not more than *a few hundred yards* in their rear. Cavalry Grand Guards may be 600 or 800 paces behind their Pickets; or, on level, unobstructed ground, a half a mile or more.

Their distance from the main body must vary, according to the nature of the ground and the proximity of the enemy, from five hundred yards to a mile or more. It should always be sufficient to give time to the main body, in case the outposts are attacked, to take arms and form.

4. It is the enemy's uncertainty as to where he may come upon a Grand Guard that secures the whole ground encircled by the outposts against his patrols and reconnoitring parties. A Grand Guard should therefore be *out of the enemy's view*; and for the same reason, its position should be occasionally changed. When practicable, it should occupy a different position at night from the one held during the day.



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5. Grand Guards should occupy *points easily defensible,* as enclosures, hamlets or villages, defiles, &c.; or supply the absence of these by abatis or other obstructions, or by entrenching, if there be time, to enable them to check the enemy's advance as long as possible.

6. The different Grand Guards must be so posted as to *connect promptly with each other.* No steep ravine, stream, swamp, or thick wood, should separate them. But if this cannot be avoided, means of easy passage should be provided, and every officer and man instructed as to where they are.

7. If there be a defile *between the Grand Guard and the main body,* by which the enemy might turn the line of posts, or cut off their retreat, it should be occupied by a strong detachment.

8. There should be no broken or obstructed ground *between the Grand Guard and its Pickets.* It is better, in such cases, to post the whole, the chain of sentinels included, on either the further or the hither side of the difficult ground; the hither side being usually preferable. But a ravine or a stream, parallel to the line of outposts, is an advantage, inasmuch as it offers a good line of defence.

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9. A Grand Guard arriving *at night* never sends out Pickets or Sentinels until patrols have examined the ground around.

10. On *a desertion* being reported, the Grand Guard changes its position at once, and a new countersign is substituted.

11. All *the approaches,* especially those on the flank, should be obstructed, or at least watched; but the obstructions should not be such as to cramp the movements of the Grand Guard, or disable it from acting offensively.

12. The Grand Guard keeps *a sentinel* constantly posted in its front, to notify it of anything unusual appearing in the line of Pickets or of Sentinels.

13. All must be *alert at night;* but, in the day time, one-half may sleep at once. Of a cavalry Grand Guard, one-half keep always mounted at night; the other half, in rear, sit with bridles in hand.

14. If the enemy *advance to attack,* notice is forthwith sent to the main body, and to the Grand Guards next on the flanks; which latter either act against the enemy's flanks, or concentrate on the point threatened or attacked, according to circumstances.

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15. Pickets and Sentinels are instructed, when driven in, to rejoin their Grand Guards by a *circuitous route* designated beforehand. This will sometimes enable the Grand Guard, whose position is usually unknown to the enemy, to fall unexpectedly on his flank; which will be very apt to throw him into confusion and rout him.

16. Both Grand Guards and Pickets should *move forward* in support, in order to give as much time as possible to the main body in rear to prepare.

But if the hostile force be too strong to admit of this, the sentinels rally as skirmishers on their Pickets, and the Pickets fall back on their Grand Guards, retiring as slowly as possible,

A Grand Guard should not retire until rejoined by all its Pickets and patrols.

**Duties of a Grand Guard Commander.**

17. His first duty is to *inspect his Guard*, and their arms and ammunition, and to see that they are supplied with subsistence according to the time they are expected to be on duty.

18. He should go with one-half of his command, in company with the Commander of the Outposts, or his staff officer, and under the instruc-

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tions received, *establish posts* for his Pickets and Sentinels, both for the day and for the night.

19. If, on relieving the old Guard, he finds it necessary to make *any change* in this respect, he immediately reports the change to the Commander of the Outposts.

20. As soon as the posts are established, he has his Picket commanders and chain of sentinels instructed by *what route they are to fall back* on their supports, if attacked by superior force.

### III. PICKETS.

1. The Pickets are furnished by the Grand Guard. *Their strength* is calculated according to the number of sentinel posts they are to keep supplied. Thus, if the Picket is to keep out four groups of sentinels of three men each, this will make each relief to consist of twelve men; and if the Picket is divided, as is usual, into three reliefs, this will make the entire Picket to consist of thirty-six men, exclusive of officers and sub-officers. A Picket is always commanded, when practicable, by a commissioned officer.

2. If the Pickets are of infantry, *some mounted men* should be attached to patrol in advance, and to convey intelligence to the rear.



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But it is very unwise, as was repeatedly shown in our late war, to exhaust cavalry horses by requiring of them more picket duty that is absolutely necessary. Cavalry has enough to do in picketing for itself and for the artillery. Infantry should do its own picketing, except where special emergencies call for cavalry.

Too much continuous picketing was another fault often committed in our late war. A judicious choice of points for picketing will save a great many horses.

3. Pickets are *posted* a few hundred yards in front of their Grand Guards; the distance varying according to the proximity of the enemy, and the nature of the ground. When the ground is broken or obstructed, the distance should be small.

A cavalry picket may be safely posted at a much greater distance out than an infantry one, unless the ground be unfavorable for its movements. If the ground be even, and the view unobstructed, a cavalry picket may be pushed out from half a mile to a mile in front of its Grand Guard.

After a battle, or when the position is to be held for some time, the distance is greater, to give better repose.

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4. Infantry pickets should not be over *six hundred paces apart;* but cavalry pickets may be fifteen hundred paces apart.

5. Pickets are posted on the *chief avenues* communicating with their Grand Guards, and always on the roads leading to the enemy; at the meeting of cross roads, when practicable.

6. The position should be chosen with reference to its facilities for observation, rather than for defence; and should be one, if possible, from which the Picket *may see, without being seen.*

7. So far as practicable, Pickets should be *in sight of their Grand Guards,* and of their Sentinels. Where this is not possible, they should post a sentinel at an intermediate point, to report what happens.

8. If the position is to be held by the corps for some days, or longer, the Picket posts should be *occasionally changed.*

9. If there be a bridge near the point indicated for the post, the Picket had better be posted *on the bridge itself,* from which it can see up and down the stream; mounted men being sent to patrol beyond it.

10. Besides the regular line of Picket posts, it is sometimes necessary to establish *an Independent Picket,* in order to watch at, or guard,

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some isolated point. It is furnished from the nearest Grand Guard, or Reserve of the Outposts.

### IV. DUTIES OF PICKETS.

1. They keep *a constant lookout* for the enemy; and, when in his presence, keep themselves constantly informed of his strength, position and movements.

2. *Signals* are concerted between them and their sentinels, to be used in case of the latter seeing anything suspicious.

3. If hostile troops *are seen marching*, the Picket commander reports the fact at once to the Grand Guard commander, with all the particulars.

4. The Picket commander's reports are always made in writing, and distinguishing always *between what he has seen himself*, and *what has been only reported to him.*

This rule is of the greatest importance, and is applicable to all military reports in the field, whatever be their occasion, or the rank of the officer making them.

5. The Picket commander sees that every sentinel is *fully instructed* as to his duties before he is posted; and should occasionally, and at

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unexpected times, make the round of his sentinels, to see that they are vigilant, and faithful in obeying their instructions.

6. The men of the Picket are instructed, that, if captured, they are to *answer no questions whatever*, except to give their name, their company and regiment; these particulars being necessary to enable them to be exchanged.

7. Great caution must be observed by the Picket commander to *prevent unnecessary alarms*; which are often caused by the enemy at night, merely to harass the troops and prevent their getting rest.

8. *On hearing a noise* in the direction of a sentinel, the Picket commander goes with a few men to find out the cause. If caused by the enemy's advance, he takes his measures accordingly; falling back, if it should become necessary, on his Grand Guard.

If the enemy suddenly attack between the outposts and the main body, he cuts his way to the rear with his Picket, as best he can.

9. Pickets only *observe* the enemy. On being attacked, they resist only enough to feel him. Resistance to hold him in check belongs to the Grand Guard.

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But a Picket must retire only before a superior force; and then, slowly enough to give the Grand Guard time to act. The sentinels rally on their pickets.

10. In retiring, the Picket moves *toward the flank* of the force in rear, so as to unmask it and allow it to act.

11. No outpost should *occupy a house* or other building, unless ordered to do so; because such a position is unfavorable to the exercise of proper vigilance, and is moreover peculiarly liable to surprise.

12. The men of the post must never all *eat or sleep at once.*

In cavalry pickets, the horses are watered in pairs. At night, one-half of the picket is mounted; the rest remain seated, arms and bridles in hand.

13. If *fire* is needed, it is hidden as much as possible. Only one half of the men should be near it; the rest being ready to repulse the enemy.

Under certain circumstances, picket fires should not be allowed at all. In the Waterloo campaign, the Allies had notice of the approach of Napoleon's Grand Army twenty-four hours sooner than they otherwise would, from the

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reflection at night in the sky of the picket fires of its Advance Guard.

14. Pickets should be relieved from the Grand Guard *at daybreak.* But the old guard should not retire from the ground, till the patrols come in and report all safe.

15. When the camp is behind a river, the Pickets should forthwith *secure all boats* and other means of transport that can be found, to prevent their being used by the enemy.

In the Peninsular war, Wellington's most brilliant achievement was his crossing of the Douro at Oporto, in face of the French army under Soult. A small boat had escaped the vigilance of the French outposts on the further side, and had been brought over in the night by some individual to the British side of the river. It was at once seized, and three persons, crossing over in it, returned in half an hour with some large barges, in which troops were sent over. These effected a lodgment in a large and strong building, then vacant, with an extensive walled enclosure, which was already occupied before the French were aware of the movement. Under cover of this strong position the British then came pouring over by thousands, and the French

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army was compelled to immediately evacuate the city.

### V. SENTINELS.

1. The *distance* from a chain of sentinels back to their Pickets should be from two hundred to three hundred paces. The distance of cavalry vedettes may be from six hundred to eight hundred paces.

These distances are more or less reduced at night, in foggy weather, or in a very broken or obstructed country.

2. Sentinels should be so posted as to be able to *see all the ground* between their respective posts, and to be able to stop any one passing between them.

3. The best system for a chain of sentinels is in *groups of three men each*, the groups being one hundred and fifty yards apart. The centre man of each group stands fast, watching on both sides, while the other two patrol to and from the groups on their right and left. By this arrangement alone can the whole ground be constantly observed. An attempt to secure this object with groups of only two sentinels, by making them all walk in the same direction, will always prove futile, especially at night.

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4. At night, or in foggy weather, the sentinels may be *doubled*, and drawn close in to the Pickets.

5. The chain of sentinels is properly posted along the bank of a river, the edge of a ravine, or of a marsh, or along the crest of a ridge, or on the skirt of a wood; but in all these cases it should be on the *hither side.*

6. In the day time, the sentinels are posted on the high ground, for a more extensive view; but at night, the posts are withdrawn *to the low ground,* from which, unseen themselves, they can distinguish moving objects against the sky.

7. A sentinel post should not be *within range of sharp shooters* from a building or enclosure, a ravine, a wood, or other cover; or near any hiding place from which the sentinel could be easily surprised.

8. An *extra line* of sentinels is sometimes necessary between the Grand Guard and the main body, for the rapid transmission of intelligence. It is furnished by the Grand Guard.

9. Sentinels, as well as Pickets, should be kept *concealed* as much as possible. If exposed to fire, they may dig a rifle pit, or throw up some sort of shelter of earth, or logs of wood. For this purpose, when near the enemy, every



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Picket post should be supplied with axes and shovels.

10. At night, when *anything suspicious* is seen or heard, one of the sentinels of the group is sent to the Picket post to report.

11. *Flags of truce* are sometimes sent by the enemy only for purposes of observation. They are never allowed to pass the chain of sentinels except by special order. If, after report made to the Commander of the Outposts, a flag of truce is allowed to enter the lines, the bearer, whatever be his rank, is first blindfolded, and then led to the General Commanding. When several persons accompany the flag of truce, only one of them is allowed to enter.

12. Deserters from the enemy are admitted only *one at a time;* and are immediately disarmed and sent to the Commander of the Outposts, in order to be examined as to the information they are possessed of.

13. But deserters *in a body*, however small, must never be allowed to approach the line of sentinels until they have first laid down their arms. If they refuse or neglect to do this after being warned, they must be instantly fired on, and the entire Picket turned out to act as may be necessary. Early in 1865, parties of Con-

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federate deserters had been repeatedly allowed to approach our lines at Petersburg without laying down their arms. On the 25th of March, several squads of Confederate soldiers stole up as deserters, and suddenly overpowered the picket posts. Right after them came a strong storming force of picked men, followed by three heavy columns of the enemy. The guard of the trenches tried in vain to check their advance, but was overwhelmed by numbers. Our main line was broken in, several batteries carried, and finally, Fort Steadman itself, which covered the extreme right of our line, was captured and occupied. Then the enemy swept our lines to the right and left, and pushed on to gain the City Point Railroad, our line of supply. The Army of the Potomac was thus placed in the greatest danger; when, through the prompt energy and skill of General Hartranft, the enemy was driven back and Fort Steadman recaptured; but the day's disaster had cost us a thousand men.

## VI. PATROLS.

1. The system of outposts is completed by *patrols*, or small detachments of three or four men, furnished by the Grand Guard, under an officer, or a sub-officer. They go the rounds, from

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time to time, along the chain of sentinels, between the sentinel posts; sometimes a few hundred yards in advance of the chain; and also between the Pickets. Their use is to keep the Pickets and sentinels always on the alert, and to search places which may hide the enemy's scouts. For this service, cavalry is always preferable to infantry.

2. When patrolling towards the enemy, especially *at night*, the men should sometimes dismount and apply the ear to the ground, to listen for the marching of troops or the rolling of carriage wheels; sounds which may be heard, by this means, at a far greater distance than when transmitted through the air.

3. Patrols are also sent out by the Commander of the Outposts, *to visit the various Grand Guards.*

4. In order to secure the constant vigilance of the outposts, patrols are never sent out *at stated times*, or at regular periods; except that one is always sent out at daybreak, this being the hour best suited for a surprise. At night, and in foggy weather, the patrols should be frequent.

5. Neither should a patrol be sent out habitually from the *same point* or in the *same direc-*

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*ion;* for this would enable the enemy to ambuscade it, or else to follow it in, and thus take the outpost by surprise.

6. The presence near our lines of *a staff officer of the enemy's Commander-in-Chief,* is usually a significant fact, indicative of danger. A patrol should never fire upon such an officer, but should capture and bring him in.

### VII. DUTIES OF A COMMANDER OF THE OUTPOSTS.

These are so various, according to the circumstances, as to defy enumeration. The principal ones are

1. To *reconnoitre* as far in advance as may be safe, obtaining all the information possible by questioning the inhabitants, and by other means, as to the position, number, and intentions of the enemy; and for the same purpose, to be constantly feeling towards him by patrols; using every means to watch his movements, and trying to guess what he is about to do.

If the Confederate patrols, early in the morning of the battle of Bull Run, had scoured all the approaches to their position, our attack on the Confederates' left would not have been a surprise that nearly lost them the day. On the contrary, informed thereby, that our main



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attack was to be on that side, instead of owing a barren victory to a panic of raw militia, they would have concentrated upon us their whole force, and thus destroyed or captured a large part of our army.

Again; on the 10th of April, 1862, a large Confederate army surprised several of our regiments in their tents at about 8 o'clock in the morning. This led to a panic, and the driving back of our troops a considerable distance. This disgrace to our arms and the slaughter that attended it, could not have happened if our outposts had that morning done their duty. The enemy was known to be concentrated in large force within twenty miles; in fact, he had attacked our outposts with a considerable force only two days before, and there was no excuse for neglecting any of the usual precautions for the safety of an army in camp; more especially, as our troops seem to have been encamped so irregularly, and in such confusion, as to render it impossible to form them promptly in line of battle in case of sudden attack.

It has been claimed that every precaution had been taken against surprise; that outposts had been properly established; that six companies of infantry were thrown forward on the

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Hamburg road, which led upon our left flank, and a squadron of cavalry sent beyond Hamburg itself; though it does not appear that we had out any troops in observation towards Monterey, on the road whch led directly to our front. However this may be, it is self-evident, that if the patrolling had been properly directed and performed, our troops would not have been attacked by a large army, many of them unprepared in their camps, three hours and a half after daylight.

2. To *study carefully the ground* in his front, so as to be able to delay the enemy as long as possible in case of an attack.

3. To have made a *sketch of the ground* covered by the outposts, showing their respective locations; which sketch he turns over to the Commander who succeeds him, at the same time pointing out to him all the approaches leading from the enemy, and imparting all other information in his possession that might be useful.

4. When *prisoners* are brought to his headquarters, he should extract from them all he possibly can relative to the strength, position, movements, and intentions of the enemy. Even when prisoners refuse to give any information beyond their names, and the company and regi-

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ment to which they belong, these particulars will often furnish an important clue to the enemy's actual numbers and position, by being compared with a list of his divisions and brigades, of what regiments composed and by whom commanded, which it is generally not difficult to make up from information received from spies, deserters, intercepted despatches, and (in these days), the enemy's own newspapers.

5. To make *written reports* to the General Commanding, or to the commander of the Advance Guard, as the case may be, of all he has learned during his tour of duty; distinguishing carefully between what he has seen himself and what he has learned from others.

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## CONVOYS

Are trains of supplies for an army in the field; but the principles relating to the conduct, the attack, or the defence of a Convoy are equally applicable in the case of a baggage train marching by itself, or of prisoners of war guarded by an escort.

The subject will be treated of under the following heads:

I. General Dispositions.
II. The Train and its March.
III. The Escort and its March.
IV. Passage of Defiles.
V. Parking of the Train.
VI. Defence of a Convoy.
VII. Attack of a Convoy.

### I. GENERAL DISPOSITIONS.

1. *Small convoys* are safer than large ones; which usually tempt the enemy to attack and capture them.

It is highly dangerous to trust everything in one convoy. In the campaign of 1758, in the

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Seven Years' War, the Prussians were besieging Olmutz in Moravia. A convoy of 4000 wagons, containing a vast quantity of ammunition and other supplies requisite for the siege, was coming to them from Neisse, in Silesia, escorted by eight battalions of infantry, 1,000 horse, and 3,000 recruits. On its being threatened, Frederick sent a strong detachment to meet it, under the valiant and skilful Ziethen. But the Austrians were in such numbers that they defeated all the troops, and took or burned nearly the whole convoy; only two hundred wagons succeeding in reaching the Prussian camp. The result was that Frederick had not only to raise the siege, but to evacuate both Moravia and Bohemia.

2. Convoys should never be sent at *regular periods;* for this would enable the enemy to lie in wait to attack them.

3. A convoy should always have a *strong escort.* A weak escort will always tempt an attack. The convoy commander should be subordinate to the commander of the escort.

4. When a convoy is of great importance, one or more *detachments* should be thrown out between it and the enemy, to cover its march. A cavalry force will be best for this purpose. In

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December, 1862, General Buell's wagon train was fifteen miles long. He marched it twelve miles out from his least exposed flank, and effectually screened its march by a brigade of cavalry which scouted all the roads.

5. If we have posts along the route, they should be notified of the convoy's departure; so that they may *push out patrols* to watch for the enemy, and give timely warning of his approach.

6. The escort commander must conceal from all except the officer commanding his advance, where he means *to park at night*, and *the road he means to take* in the morning; because in the enemy's country, among the wagoners, muleteers, or other persons that have necessarily to be employed about every convoy, there are usually spies.

### II. THE TRAIN AND ITS MARCH.

1. Pack animals travel better *in front* of the wagons, than behind them.

2. The *pioneers' tool wagon* should lead the whole; with chevaux de frise, to keep off cavalry.

3. The train is in *four sections*.

Powder and money are carried in the second section, as being the safest.

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Provisions, and other supplies are distributed equally through all the sections.

4. The train is kept *well closed*, the wagons four paces apart.

The leading wagon must slacken pace to let the others come up, when retarded by an obstacle; and the commander of the leading section will sometimes halt it, to enable the rest of the train to close up; especially near the enemy.

5. If practicable, *each wagon* should have a soldier to guard it; or each section should be attended by four or five horsemen, moving up and down the line, to see if all goes on well.

6. The march is always in *double file* when the width of the road permits. But there should be no change from single to double unless the march can continue double for at least one hour; for time is lost in changing.

7. The manner of *doubling* is shown in Figure 3.

The wagons of the first and third sections file out to the right. The second and fourth simply close up.

8. The manner of *undoubling* is shown in Figure 4.

The wagons of the first and third sections file out to the left, quickening the pace; the move-

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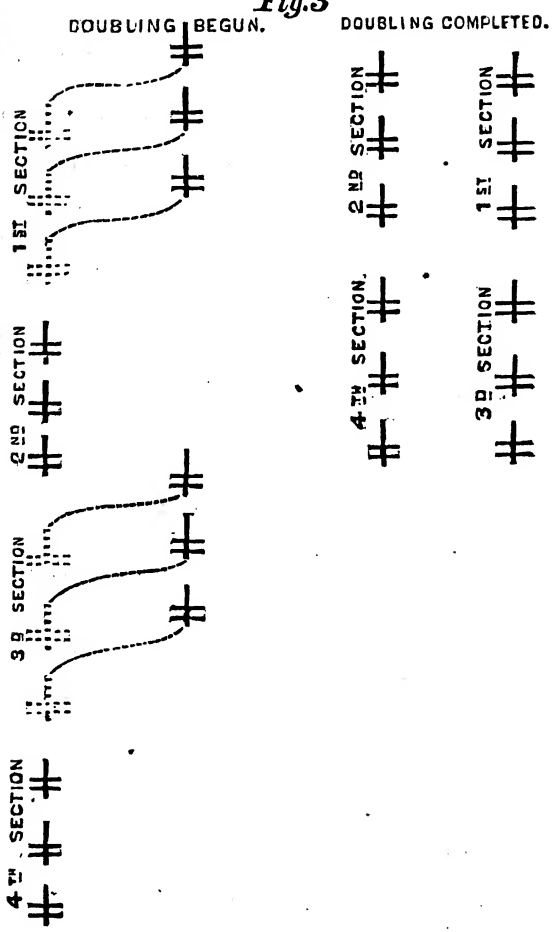
*Fig.3*



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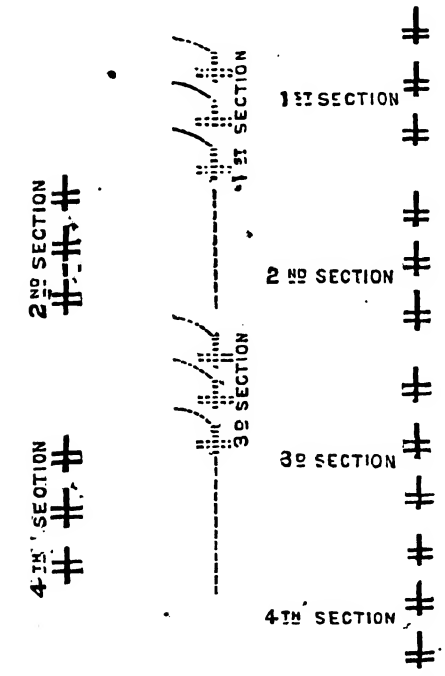
ment commencing when the rear wagon of the section has passed the leading wagon of the sec-

*Fig. 4*




tion it is to precede; the fourth section slackening the pace, to make room for the third.

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9. An army has seldom or never with it sufficient transportation for its stores and supplies; and this has therefore to be furnished, in a greater or less degree, by the inhabitants of the country. In an enemy's country, the teamsters and muleteers attached to the convoy, being enemies, are naturally tempted, on its being attacked, to *cut the harness* and escape with their animals in the confusion. To prevent this, they should be notified that they will be fired at if they try to escape; and orders should be issued accordingly to the escort.

### III. THE ESCORT AND ITS MARCH.

1. The escort should always consist of both *infantry and cavalry*, and sometimes of all the three arms.

Infantry is always necessary, as it can fight on all kinds of ground; and under, or behind the wagons, or within them.

Cavalry is also needed. Each wagon, with four horses, occupies ten yards of road, one hundred wagons, one thousand yards, and five hundred wagons, five thousand yards, or nearly three miles. Attacked by hostile cavalry, such a length of column could never be successfully defended by infantry alone.

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Apart from this, some horsemen are always necessary, to scout the road to a considerable distance in advance of the convoy.

2. The escort is divided into *five parts*:

(1). An advance guard, preceded by

(2). A small cavalry detachment, to examine the ground.

(3). A rear guard.

(4). Flank detachments.

(5). The main body.

3. The *main body* is itself divided into four parts:

(1). One-half, as a reserve.

(2). One fourth, as a guard marching at the centre of the convoy, called the *centre convoy division.*

(3). One eighth, a detachment marching at the head of the train, called the *head convoy division.*

(4). One eighth, a detachment marching in rear of the train, called the *rear convoy division.*

4. The proper *order of march* is as follows:

(1). The cavalry detachment, thrown as far forward as may be safe, to examine the ground.

(2). The advance guard, one thousand paces, more or less, in front of the train.

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(3). The head convoy division.

(4). The rear convoy division.

(5). The rear guard, at the distance of one thousand paces, more or less, behind the train.

The reserve marches, usually, near the centre of the train.

The flank detachments, usually of cavalry, are kept as far out as circumstances admit; each platoon keeping out flankers on its outer flank. The head and rear convoy divisions keep close to the convoy.

The centre division should march in two detachments, one on each side of the train. An opening of eight or ten paces should be left in the train, to enable them to pass through from one side to the other.

The escort divisions march, of course, by the flank, when there is no room for a march by the front.

Pioneers precede the train, to repair the roads, bridges, &c., and remove obstructions. They may be also needed in rear, to destroy bridges, and obstruct defiles, after the passage of the rear guard.

5. The order of march of *an entire convoy* with its escort is shown in Fig. 5.



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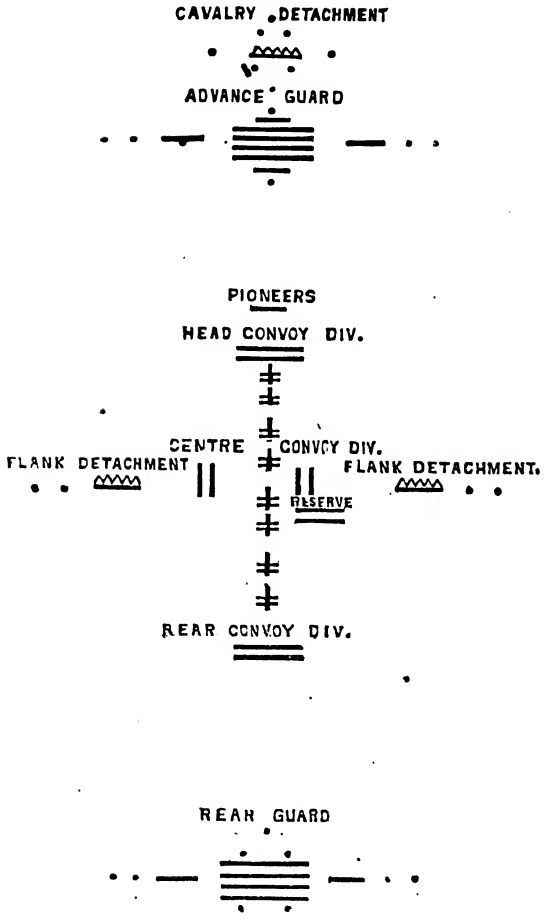
*Fig. 5*

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6. In the march of a convoy, the escort should *redouble the usual precautions* of a marching column against surprise.

7. The advance guard must occupy the debouches of *all lateral roads* by detachments, which may be relieved from the reserve when it comes up.

### IV. PASSAGE OF DEFILES.

1. On the convoy's arrival at a defile, it is parked near the entrance in *lines of sections.*

The centre convoy division joins the advance guard, to strengthen it. The rear guard takes a position to cover the rear. The reserve keeps a central position. The flank detachments remain on the flanks.

2. The *reserve* then sends forward a detachment into the defile to secure its flanks, and also the outlet on the other side. This detachment, on arriving at the outlet, sends out patrols in all directions, to examine the ground in front.

3. When the patrols *report all safe,* the advance guard and the centre convoy division pass the defile, and go far enough beyond it to cover parking ground on the other side.

4. The reserve and the flank detachments *cover the flanks* of the convoy till it arrives in

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position on the other side, and then go to their posts in column.

The rest of the escort and the rear guard follow as soon as the convoy is in position.

5. Before the convoy resumes its march, it will be well to send out detachments in different directions *to reconnoitre*, in order to prevent surprise.

6. These precautions in passing a defile should *never be omitted*, except when unnecessary, from there being an unobstructed view over the whole country around, or from its being absolutely certain that there is no enemy in the neighborhood; because a convoy, resolutely attacked in a defile, is sure to be captured or destroyed; and convoys are sometimes so important that the loss of one may cause the loss of a campaign.

7. If the *enemy already occupies* the heights or woods forming the flanks of the defile, and we have not force enough to dislodge him, there is no course left but to dash the convoy through as rapidly as possible.

But if the enemy be also awaiting us in force at the outlet of the defile, the situation is so dangerous that the escort commander must decide upon one or the other of two courses;

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either to fight a battle, which, if successful, will enable him to push the convoy through, or to save it by a retreat.* The more pressing the importance to our arms of the prompt arrival of the convoy at its destination, and the greater the apparent chances in our favor in the combat, the more decisively will the former of these two courses be indicated; and *vice versa.*

### V. PARKING OF THE TRAIN.

1. On halting for the night, park in a *strong position;* offering, if possible, but one side for attack.

2. In parking, when practicable, all the wagon poles should be turned in one direction, pointing toward the *place of destination.* This saves time in resuming the march.

3. When the convoy contains *powder,* it is not safe to park in a village, or even to pass through one.

4. If a halt for more than one night be intended, park the wagons in *lines of sections;* the lines about fifteen paces apart. Cover the flank openings by wagons placed across them as traverses.

5. The strongest defensive park is in the

*See "Forcing a Defile" in a Treatise on "The Special Operations of War."

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form of a *square;* which, in case of attack, will serve as redoubt.

On the square being formed,

(1). See that the ground around afford no cover to an enemy within musket range.

(2). Cover the angles of the square with chevaux de frise, abatis, or other obstructions.

(3). Flank the faces of the square with guns, if there be any; supported by infantry or cavalry detachments in rear.

(4). Post the convoy divisions and the reserve inside of the park; the divisions behind their respective convoy sections; the reserve in the centre; the advance and rear guards and the flank detachments outside of the park, with their outposts and sentinels.

(5). Place ammunition wagons, or other valuable ones, inside of the square.

The train, according to its size, may be formed into one square, or into several squares. The formation of a park may be also in a circle.

6. If the convoy consist of *powder*, the escort must in no case, when attacked, take refuge in the park; for this would greatly endanger both the powder and the escort itself by the enemy's fire. And care must be taken

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that the camp fires be always to the leeward of powder wagons and of batteries.

7. If there be not wagons enough to enclose troops, they may be parked in a *single line.* In this case, the wagons are placed wheel to wheel, with an outlet of three or four feet between every six of them, a wagon being placed lengthwise behind each opening, as a traverse; the horses picketed opposite their wagons.

8. If the convoy be threatened *during its march,* and have no time to park in square, rapidly form in double file, and face the wagons inwards, the horses' heads nearly touching in the centre of the road, and the wagons as close together as possible.

If the wagons be already in double column, the defensive park may be promptly formed by wheeling them round to the right and left, so as to face inwards.

9. The proper place for *guns* is always at an angle of the park, the faces of which they thus protect from assault by a flank fire; or at some weak point, or where the ground in front can be most completely swept.

### VI. DEFENCE OF A CONVOY.

1. The defence of a convoy of any considerable length is *one of the most difficult* of mili-

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tary operations, as, on the other hand, the capture of one is one of the easiest. For, while the assailants can concentrate for the attack, the defenders cannot concentrate for the defense.

2. When the escort is *stronger than the hostile force* which threatens the convoy, and has time to concentrate before the attack, it should at once march to anticipate the enemy and overthrow him.

But this will rarely be practicable; because, in order to prevent a concentration of the escort, the attack of a convoy is usually made by surprise.

3. We should park only when it is plainly necessary, as this always occasions a loss of time, which might enable the enemy to be reinforced. If, therefore, on being threatened with an attack, we see in front a village, a wood, a stream, or any other position which would facilitate a defence, we should *hurry the convoy up to it.*

4. The formation of a defensive park has been already explained. On its *being attacked,* some of the convoy divisions throw out skirmishers while others fire from the wagons. If the fire does not repulse the enemy, the reserve sallies and charges with the bayonet.

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5. *No fixed rules* can be laid down for the defence of a convoy, which must obviously vary according to the mode and circumstances of the attack. It will suffice to observe,

First, That if the attack be made on a single point alone, the nearest portions of the escort should concentrate to repel it; and that, if necessary, the whole escort should concentrate for this purpose.

Secondly, That if the attack be made on different parts of the train at the same time,

(1). The advance and rear guards, and flank detachments will close in on the convoy, to act as may be needful.

(2). The head and rear convoy divisions will generally keep their positions, to defend the first and fourth sections of the convoy respectively.

(3). The centre convoy division will concentrate on the flank attacked, and take a position to cover the two centre sections.

(4). The reserve will take a position from which it can the soonest support the troops engaged, and most effectively aid in repulsing the attack. Finally, it must be borne in mind that, though a convoy may be easily captured by a sudden rush of the enemy, it may as easily



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be recaptured by a sudden and vigorous charge of the escort.

6. When there is great peril, the enemy may be allowed to capture or pillage a part of a convoy, *in order to save the remainder.*

The ammunition and the subsistence stores are always the most important to be saved.

7. Sometimes an entire section of a convoy may be saved by taking *some by-road* in the heat of the engagement.

8. In case of necessity, the convoy horses may be used to *double the artillery teams* and thus enable the artillery to escape.

9. If we are unable to save even a part of the convoy by abandoning the rest, we should try to save, at least, *the horses.* If this be impossible, we should kill the horses, and burn or blow up the entire convoy; so that, at all events, the enemy may derive no advantage from it.

### VII. ATTACK OF A CONVOY.

1. The capture of a convoy is generally an easy task, even with a force inferior to the escort; since the escort is obliged to keep on a strict defensive, close to the train, and to remain scattered in small detachments.

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The best method of attacking is by *an ambuscade*; threatening several points at once, to prevent the enemy from concentrating.

2. If the object be to *capture the whole convoy:*

Beat and disperse the escort, while a detachment secures the convoy.

If the object be to *cut off a part:*

Threaten another part; and when the convoy troops are withdrawn from the part wanted, cut it off.

If the object be merely to *delay the march:*

Threaten the convoy often, in order to force it to halt and park. Obstruct the roads and break down the bridges in its front.

3. To attack a convoy parked in a square or circle for defence, *artillery* may be needed; as it is difficult to force such a park with infantry alone, unless the escort be very feeble, or there be covers close by, from which, after firing, we may rush onthe park. Otherwise, a few shells dropped in its interior will be usually the speediest means of accomplishing the object.

4. In attacking a convoy *in a defile*, seize the leading wagons and place them across the road, so as to block the passage of the rest.

5. When our attack on the convoy *has succeeded*, our main body is kept together, while

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the train is being secured or destroyed by a detachment. The cavalry captures or disperses the escort, and brings in all the horses cut loose. We should have spare horses in harness along with us, to replace those of the convoy that may be killed, maimed or cut loose.

6. On taking a convoy, first find out from the prisoners, or otherwise, which is *the most valuable part.* If the whole convoy cannot be carried off, take this part away and burn the rest. If there be no time to do this, pillage the whole, or else destroy it.

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## FORAGING.

1. The expense of transporting the vast quantity of forage required for the daily use of the animals accompanying an army is so enormous, that the chief reliance for this kind of supplies must be on the country through which the army is marching. In the enemy's country, therefore, foraging is *a necessary operation* in war; and it causes less distress to the inhabitants than the taking of subsistence for men.

2. Foraging is a well established right of war; but it should not be resorted to when the object can be accomplished by *a requisition on the civil authorities.*

3. If our foragers are killed by the enemy in cold blood, *retaliation* may be necessary for future protection. But we are bound to prevent, by every means in our power, the commission of any excesses by our foragers. The honor of the nation requires that all acts of outrage and insult committed by its troops upon inoffensive



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citizens in the enemy's country, or of wanton and unnecessary destruction of private property, should be punished with the utmost severity.

4. Never send out a foraging party till the country around has been *reconnoitred*, to ascertain, both in what places the forage may be obtained, and whether the enemy is present in such force as to make the foraging dangerous or impracticable.

5. A foraging party should always be accompanied by *an escort*, which should keep out an advance guard.

6. If the foraging ground be distant from our camp, it will be prudent to post a special *detachment in support*, about half way.

7. Before the foraging begins, trustworthy troops should be posted in the villages or hamlets around, to *prevent pillage*.

8. One or more *staff officers* should always be sent with a foraging party, to see that orders are properly executed, and to report irregularities.

9. To prevent pillage, it is better not to take a foraging party into a village. In order, if possible, to avoid this, *a demand* should first be made outside for the amount of forage required.

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10. If a town or village *has to be entered*, certain houses should be assigned to certain companies; each one being made responsible for the proper conduct of the foraging in its own section. If any company, or other corps, pillages, due compensation should be made to the parties pillaged, and the amount deducted from the pay and allowances of the pillaging corps.

Post guards, and send patrols to arrest foragers guilty of disorder.

11. Foraging officers should make their levies with as much equality as possible, and with due moderation. *Accurate accounts* should be kept of everything taken, so that it may be properly distributed and accounted for.

12. Even when it is not supposed that any compensation will ever be paid, it is well to offer to the owners, *certificates* of their property having been taken for the use of the army.

13. On arriving at the foraging ground, the escort will be posted in such a manner as will *best cover the foraging;* keeping a reserve, concealed, if possible, at some central point.

### To Attack Foragers.

14. To attack a party engaged in foraging, we charge with our whole force, and capture or

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disperse *its escort*. But if a portion only of our own force will suffice for this, we divide it into two detachments, one of which attacks the escort, while the other throws itself upon the foragers, compelling them to desist from their work; capturing or destroying the forage already collected, and taking the foragers prisoners.

Further than this, no fixed rules can be given for the attack or for the defence of foragers while engaged in foraging; since the proper mode of conducting either will depend on the special circumstances of the case, which must constantly vary.

15. A foraging party *returning with forage* is a species of convoy. For the attack or defence of such a party, therefore, the general principles already laid down for the attack or defense of a convoy will be applicable.

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## RECONNAISSANCES

will be treated of under three heads:

I. OBJECTS OF A RECONNAISSANCE.

II. HOW MADE.

III. OFFENSIVE PATROLS.

### I. OBJECTS OF A RECONNAISSANCE.

Reconnaissances are of three kinds:

1. *Topographical*; which are made for the purpose of obtaining accurate knowledge of the face of the country, the various routes of communication, the military positions to be found on or near them, the situation and relative distances of towns and villages, mountain heights and ridges, the course of streams and the best points for crossing them, and various other particulars; without some knowledge of which no army can successfully, or even safely, operate in an enemy's country.

The practical details of this kind of reconnaissances are so numerous, and vary so much with circumstances, as to be out of place in a

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summary of general principles. They belong to the sphere of staff duty, and require a special study.

The following plan was adopted by General Rosecrans when in command of the Army of the Mississippi, for obtaining an accurate knowledge of the country.

From the best geographical map to be found, a large skeleton map was prepared. This, after being filled in, so far as practicable, from information obtained from scouts, spies, deserters, prisoners, and citizens, was then photographed, and copies of it were distributed among the subordinate commanders, with instructions to correct and complete. For this purpose, a topographical officer was attached to each brigade. This system was afterwards carried to great perfection in the Army of the Cumberland, and proved of the greatest utility.

2. Reconnaissances having *some special object;* as, to ascertain whether the enemy holds possession of a certain defile or village. These require no special discussion.*

3. The enemy being enveloped in a cloud of outposts, we must pierce it *to know his position*

*See "Conduct of Special Detachments," in The Special Operations of War."

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*and force.* This is the object of the third and most common kind of reconnaissances, which is the one now treated of.

4. In respect to this last kind, *the important points* are;

(1). The enemy's numbers, and where and how posted.

(2). The key points of his position; and in this connection, the points occupied by batteries, and those entrenched.

(3). His distance from our own position.

(4). The nature of the ground between us and the enemy; whether passable, and for what arms.

(5). The approaches to his position in front, flank and rear.

(6). The avenues by which the enemy may approach our own position, in front, flank and rear.

## II. HOW MADE.

1. The best time for reconnoitring the enemy is at *early dawn,* when most troops stand to their arms; it being then that their position and strength can be most clearly seen.

2. When practicable, reconnaissances are made secretly. When this is not practicable,

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we must resort to an open, or what is sometimes called, an armed or a *forced* reconnaissance. This is done sometimes by sending forward skirmishers to attack the enemy; and sometimes by pushing a force inside of his lines; thereby making him deploy his masses, and thus show his strength and position.

3. When our reconnaissance is directed against a particular part of the enemy's position, we may threaten other points of his line at the same time; thus effecting *a diversion*, and at the same time compelling him to exhibit his whole force.

4. An open reconnaissance in force is always made at the risk of bringing on *a general engagement;* and the object in view may be so important as to justify this risk. Therefore, while such a reconnaissance is being made, our whole army should be drawn up, ready, not only to support the reconnoitring corps, but to profit by any opportunity that may offer to win a victory.

5. *Secret* reconnaissances are usually made by an engineer or other staff officer, with an escort of a few men.

6. The most effectual mode of making a secret reconnaissance is by *a single person*, who

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can move about and station himself unseen where the smallest patrol would probably attract attention.

During the Peninsular War, it was a custom in the British army for a single mounted officer to hover for days around the enemy, and watch the direction of his march. On one occasion, a cavalry captain, thus employed, discovered that the French had not left their sick or their stores at Celerico; showing that they had adopted a different line of operations from the one ostensibly taken; a point which it was of the greatest importance to Wellington to ascertain.

7. A secret reconnoitring party starts at dusk, or *during the night*, in order the more surely to conceal its march.

8. Whenever it is expected that the reconnoitring party may be pursued, *detachments* should be stationed along the road, ready to cover its retreat.

9. If a reconnoitring party of cavalry will have to return through a defile, *some infantry* should be sent forward to occupy and hold the defile as long as may be needed. On the other hand, whenever the escort consists of infantry, some horsemen should be sent with it to convey intelligence rapidly to the rear.



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10. The reconnoitring officer should have with him *a reliable guide,* and should take with him a pocket telescope, and, when circumstances would make it useful, a topographical map of the country around. He should obtain all the information he can before starting relative to the route he is to pursue, and to the object of his mission.

11. On *arriving at the point* from which the reconnaissance is to be made, the escort may be divided into two or three sections, echelonned along the road, and hidden from view; the worst mounted one being in the rear. The reconnoitring officer may then advance with two or three well mounted men, and make his reconnaissance.

If he is seen by the enemy and pursued, he will rejoin the most advanced echelon; which, by showing itself suddenly, will probably induce the pursuers to halt, for fear of an ambuscade. This echelon may then fall back on the one next in rear, and the latter one on the third. These successive appearances of troops would be apt to make the enemy hesitate, and thus give time to the whole party to escape.

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### III. OFFENSIVE PATROLS

1. Is the name given to ordinary patrols when pushed forward for *reconnoitring purposes*; to distinguish them from those whose chief object is the security of the troops in march, or in camp. They usually consist of a few men only; but when used offensively, their strength is increased to a platoon, or to one or more companies, in order that they may be able to capture small posts and bring in prisoners.

2. The patrol commander should *note all the ground* he passes over; especially points favorable to his defence, or which might endanger his retreat, should he be driven back; and, however small his command, should have out an advance guard, a rear guard, and flankers; for his patrol is of such a strength that it is liable to attract the enemy's notice and invite attack.

3. He should use the utmost circumspection in approaching ground *favorable for ambuscade;* as a defile, a wood, a ravine, a village, a farm house, or an enclosure. He should halt the main body out of musket range, or else under cover, and send a few picked men forward, one after the other, to examine; but keeping within each other's sight. He should

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approach the crest of an eminence in the same manner as the apex of an Advance Guard; a single man first creeping up cautiously to look over the top.

On the route, the party should keep on the lookout for tracks, whether of men, animals, or carriage wheels.

4. If the point to be examined is at a distance from one of the flanks, the main body of the patrol is *halted* till a report; or, if it move on, it should leave two or three men to bring up the report.

5. At night, *all precautions are redoubled.* Signals, addressed to both the eye and the ear, are fixed upon, in case of separation. The patrol attends to everything that passes; the barking of dogs, or other noises; fires, smoke, &c.

6. If the *enemy is seen* in any force, the command is halted out of his sight; measures are taken against surprise; and the commander goes with a few picked men to reconnoitre.

7. On seeing the enemy in not too great force, the patrol attacks suddenly, and *makes prisoners*; from whom important information is often derived. Indeed, no opportunity of capturing prisoners should ever be lost; for, from

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the information extracted from them, even when it extends no farther than the names of the enemy's commanders, we may often be able to ascertain the location of particular corps, and guess pretty nearly the strength of his force in our front.

In the Confederates' fierce assault on our right at Fort Donelson, the prisoners we captured had their knapsacks and haversack. "Are their haversacks filled?" asked Grant. "Yes, with three days rations," he was answered. "Then" he exclaimed, "they mean to cut their way out, and have no idea of staying here to fight us. Whichever party attacks now will whip." And he immediately gave orders for the advance of our left under General C. F Smith, which led to the surrender of the fort with its garrison of 15,000 men.

8. In every war, the want of constant and faithful reconnaissances has led to *disastrous results.* One case may suffice as an example.

For two days after Wellington's victory over the French at Busaco in the Peninsular War, he had no information of their movements. But the French were meanwhile secretly making a flank march through a mountain path by their right to the plain of Coimbra, which



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led directly upon Wellington's rear, and to Lisbon. This forced the English army to fall back precipitately to its lines of Torres Vedras; thus losing, in two days, the fruits of its victory, and leaving all Portugal open to the invaders.

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# NOTES ON LOGISTICS.

Logistics is the art of supplying and moving an army in the field.

As all strategic movements are necessarily dependent upon a sufficiency of supplies and of transportation, the subject is second in importance only to Strategy itself.

The topics treated of in these Notes will be

I. As to Supplies Generally.
II. Magazines.
III. Transportation.
IV. Reduction of Transportation.

## I. AS TO SUPPLIES GENERALLY.

1. The term, *supplies,* includes subsistence for men, forage for animals, ammunition, hospital stores, and everything else that an army must be constantly consuming.

2. Before the campaign begins, the General Commanding should acquaint himself with *the resources of the country* he is to operate in; so as to be able to determine what amount of sup-

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plies the army can obtain from the country itself, and what amount it must take along with it.

3. The people of every civilized country always have *a surplus*, more or less considerable, of provisions on hand for future use. It was tersely replied by General SHERMAN, when asked how his army was to exist in the enemy's country, "Where millions of Georgians live, my men cannot starve" and again; ("Where other people live, we can; even if they have to starve, or move away." The two elements in the calculation of the amount the troops will find in any particular district are First, the number of inhabitants, and Secondly, the fertility of the soil, and the extent to which it is under cultivation.

4. The *greater the population*, the larger will obviously be the amount of surplus provisions that may be appropriated; and *vice versa*.

In very thinly inhabited countries, therefore, this source of supply cannot be relied on; military operations will be comparatively clogged, and easy communications become of the greatest consequence. So that, in such a country, a line of communication crossing mountain ridges, or streams liable to be swollen, is to be avoided.

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5. But though there may be a surplus of supplies on hand sufficient for an army marching through a district, this may not suffice where the army is to *remain*, or to make long halts in it; for the amount consumed each day by an army of any considerable strength is enormous, and will soon exhaust even the largest surplus. In such case, therefore, the army must keep open a communication with some secure base, in order to be supplied from it when the surplus provisions of the district are exhausted.

6. As to *the other element:* It is obvious that the more fertile the soil, and the greater the extent of it that is under cultivation, the larger will be the amount of surplus supplies that the inhabitants may reasonably be supposed to have on hand.

7. It is on account, chiefly, of the greater facility and certainty in obtaining the necessary subsistence that a large army usually marches in *several columns*, by different parallel routes; sometimes, even, when this may carry them beyond supporting distance from each other, and so expose them to defeat.

8. An army operating for any considerable time in an enemy's country must draw from it a large portion, at least, of its daily supplies and

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means of transportation. There are *several modes* in which these supplies may be obtained:

(1). By purchase from the inhabitants with its own funds.

(2). By imposing money contributions on the people through their governmental or municipal authorities, and purchasing the supplies from the inhabitants with the moneys thus levied.

(3). By allowing the troops to subsist themselves.

(4). By requisitions in kind.

9. As to *purchasing* them with our funds:

Purchasing our supplies from the inhabitants at fair rates would be certainly attended with these advantages, that it would preserve the discipline of our troops, and would tend also to make partisans for us among the people.

But to this method there are two insuperable objections:

(1). It is in the highest degree uncertain; leaving the subsistence, and therefore the very existence of the army at the mercy of the enemy. Either from the hostility of the inhabitants, or from compulsion by their authorities, they would often fail to bring the supplies called for.

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(2). Even if the supplies could always be obtained by purchase, the expenses attendant upon the subsistence of a large army in the field and the necessary transportation for it are so enormous that, if kept up for any length of time, and borne exclusively by the government to which the army belongs, they would exhaust its finances; and then the war would have to be given up for want of means to carry it on.

For these reasons, NAPOLEON'S system, which was to "make war support war," seems to be the only practicable one; at least, where the war is of any considerable importance or duration.

10. Where the war is waged to *suppress a rebellion*, it is a mistaken policy on the part of the government to abstain from adopting, in the rebel districts, from the very first, the system of compulsory supplies. Till this is done, it cannot reasonably expect any important successes in the field, however brave and numerous may be its armies, and however skilfully they may be handled; so much do these successes depend upon ample supplies and means of transportation. A people in rebellion are surely not entitled to any more consideration than the inhabitants of any other enemy's country. And even

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if they were, the system of forced supplies, by greatly facilitating military operations and making them far more effective, would tend to shorten the war and lead to peace; which alone can bring them permanent relief. If the property of loyal citizens may thus be sometimes taken, this may be remedied by requiring receipts to be in all cases given to the owners when the supplies are taken; at the close of the war, loyal owners to receive reimbursement from the nation.

11. As to *money contributions:*

This is an excellent method of enabling us to obtain supplies, when practicable; for it is substantially a tax, falling, like most other taxes, on the rich rather than on the poor. And if it be announced, at the same time, that all supplies brought in will be paid for in ready money, the effect must be more conciliatory on the mass of the population than any other mode of extorting supplies from them that could be devised. But it is obvious that opportunities for these contributions would often be wanting; and that, however eligible this method may be as an auxiliary to other modes of obtaining supplies from the people of the country, it cannot be relied

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upon as a sole, or even as a principal means for that purpose.

12. The worst possible mode is that of leaving the troops *to subsist themselves;* for this leads

(1). To an entire relaxation of discipline, without which a military force is only an armed mob.

(2). To universal pillage, and to murders and other outrages by the troops upon the inhabitants, which always follow in its train.

(3). To the consequent massacre of straggling parties, in retaliation, by the inhabitants, who are thus made bitter enemies.

(4). To an enormous waste and destruction of the supplies themselves over and above what is actually consumed; supplies of which the army itself may soon afterwards have most urgent need. This was exemplified in NAPOLEON'S Russian Campaign, where this system was to a great extent permitted. One principal cause of the disorganization and awful disasters of the retreat from Moscow was the wanton destruction, by the French advance columns, of immense quantities of provisions along the route, which would have amply sufficed for the subsistence of the entire army; in consequence of which,



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thousands of French soldiers perished of starvation.

13. The best and most reliable mode of obtaining supplies in the enemy's country appears to be by *requisitions in kind* on the local authorities; the method usually practised by NAPOLEON in the Peninsular War.

One advantage of this system over that of relying upon magazines in our rear is, that it will enable us to abandon our own line of operations for the purpose of seizing upon the enemy's, or for any other important object. In the Peninsular War, NAPOLEON sometimes put this system to direct strategic use. He would send to order so many thousand rations to be in readiness at a particular place on a certain specified day, or at certain specified times at a series of places along a certain route, different from the one he really intended to take; by this means blinding the enemy to his movements, and thus gaining one or more marches upon him.

14. But in a *very sparsely settled country*, like most of the Southern and Southwestern districts of the United States, supplies are too scarce to allow of any reliance on the system of requisitions. Unless, therefore, in our campaigns in those districts during the late war, our

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supply transportation was to be so vastly increased, as to render our columns mere inert masses, some other methods of subsisting our armies had to be resorted to.

In General GRANT'S march through Mississippi in his Vicksburg campaign, parties were continually sent out, by night and by day, on each side of the main column, which searched houses and barns, and flour mills; seizing all the animals that came in their way. Some of these parties, when without commissioned officers, were occasionally guilty of excesses; but the march was too rapid to admit of much pillaging. In twenty days after crossing the Mississippi, GRANT had marched two hundred miles, beaten the enemy in five battles, killing, disabling or capturing some 12,000 of them, taken twenty-seven heavy cannon and sixty-one field guns, won important strategic advantages, and invested Vicksburg. Yet his troops began the march with only two days rations, carried in their haversacks, and only five days' rations were afterwards issued; the columns subsisting chiefly by the supplies thus picked up on the road; for the transport of which, wagons enough were also found and appropriated.

And in regard to transportation, in SHERMAN'S march through Georgia in 1864, he authorized

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his cavalry and artillery to appropriate all horses, mules and wagons belonging to the inhabitants freely, and without limit; but discriminating between the rich, who were generally hostile to us, and the poor and industrious, who were usually friendly, or at least neutral.

During General SHERMAN'S march through Georgia in 1864, his army was subsisted by an excellent system of foraging. Each brigade had its regularly organized foraging party under discreet officers, which gathered along the route supplies of meat, vegetables, meal, corn, and forage sufficient for its own brigade; at least ten days' subsistence for the troops and three days' forage being kept at all times in the wagon trains. During a halt, the soldiers were allowed to gather vegetables and drive in stock found close to their camps, but all other foraging was confined to the regular foraging parties; and these were ordered to refrain from abusive or threatening language, and when possible, to leave with each family a reasonable portion for their maintenance; a certificate of the facts being given to the owners whenever the officer in command should deem it proper.

The operations of the so-called "bummers" or straggling marauders, in Sherman's march

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through Georgia and the Carolinas, had no connection with any organized corps. The voluntary employment of these bands of pillagers, or a connivance at their doings, would have set the moral sentiment of the civilized world at defiance; for, by the Articles of War governing every civilized army, marauding is a crime punishable with death. The toleration of these marauders may be apologised for, but not defended; and the only apology admissible is, that it was unavoidable. Straggling is an evil which always exists, to a greater or less extent, among even the best disciplined regular troops. It is therefore not surprising that a large volunteer army of Western men, born and brought up in all the individual freedom of frontiersmen, should have had its thousands of reckless soldiers who could not be made to keep with their colors; since, in the march through the enemy's country, there was obviously neither time nor force to spare to pursue, arrest and bring them in. Had all the regiments of that army been subjected, before taking the field, to a long course of discipline in camp or in garrison, the evil would have been in great measure prevented; but the exigencies of the war rendered this impossible.



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## II. MAGAZINES.

1. Whether the plan of subsisting on the enemy be adopted or not, an army should always have a *reserve of supplies* on hand for an unexpected march, or other emergency. Depots of supplies, or magazines, are not only useful, but to a greater or less extent, necessary. In barren districts, an army without magazines would be in great danger of destruction. And even in fertile and populous ones, which may furnish enough of subsistence, we must rely on our own depots for supplies of ammunition, ordnance, and warlike material. As to ammunition, a single great battle will generally use up all an army can carry with it.

2. *Magazines* are either

(1). Principal; at the base of operations.

(2). Secondary; on the line of operations; or

(3). Provisional; in the immediate neighborhood of the troops, with supplies for a few days only.

3. But we cannot safely rely on magazines *exclusively*. We must combine with them, the system of forced requisitions, or else that of a regulated foraging on the people of the country; else the army can have no celerity of

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movement. A reliance on magazines alone will fetter our movements, and render all our operations subordinate to the means of supply

4. Another inconvenience attending the dependence on magazines is that, as the movements of the army must be such as to cover them, they *reveal to the enemy our plan of campaign.*

5. Magazines containing *vast supplies of subsistence* and material are dangerous. They render the strategic movements of the army completely dependent upon them, and, like large convoys, they invite attack; when, if they are carried, all is lost.

From disastrous experience in this respect, the Austrians, in 1809, gave up their system of vast depots in time of war. But they substituted for these, ponderous, moveable magazines, accompanying their columns; which rendered their movements so slow that the French easily outmarched them, and so, beat them as before.

6. NAPOLEON said that at *every five or six days' march,* there should be a fort or entrenched position for a magazine of provisions and military stores, and the organization of convoys. In his last campaigns this system seems to have been, to a great extent, carried into practice.

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Immediately on the troops arriving at the points designated for these depots, ovens were built for the baking of biscuit, ammmunition collected and stored, and hospitals organized.

These depots along the route enabled those men of the marching columns who were exhausted, or temporarily indisposed, to halt for a few days and recruit, instead of forming an impotent tail to the army, lengthening as it advanced.

Another advantage of such depots echelonned along the route is that, if the army be forced to fall back, it will find reinforcements in their garrisons, and means to refit in their stores.

7. As to the *location* of depots for supplies:

(1). They should be located in places that are either strong by nature, or made so by art; so that they may be guarded by small garrisons, and thus not reduce unnecessarily the force operating in the field.

(2). They should be established on rivers, canals, roads, or railways, communicating with our line of operations; so that the supplies may be transported with ease and rapidity as the army advances.

(3). In a defensive war, they should never be in the first line of defence, which is always

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liable to be suddenly forced; especially where the line of defence is a river, which, almost always, may be easily turned.

4. In cantonments, they should be located at those places in rear which are fixed for the rendezvous of the respective army corps; so that each corps may have enough for a march of eight or ten days, on a sudden alarm.

### III. TRANSPORTATION.

1. The *quantity of transportation* required by a large army engaged in active operations in the field is very great. In our service, the weight of one thousand rations, that is, one days' subsistence for one thousand men, packing included, is about 3,500 lbs.

For an army of ten thousand men per day, 35,000 "

For an army of one hundred thousand men, per day, 350,000 "

But there must be added to this a vast amount of transportation more, for infantry ammunition, each box of which, containing one thousand rounds, weighs about one hundred lbs.; for artillery ammunition, hospital stores, quartermasters' and artificers' tools and materials, other military stores, pontoon trains, sut-

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ler's stores, and sometimes, forage for cavalry, artillery, and draught horses, and baggage animals. The number of these that must accompany a large army is enormous. In October, 1862, McClellan's aggregate force, citizen employees included, was 122,000 men. The transportation for ten days' *subsistence alone* of this force was 1,830 wagons, and 1,098 pack animals. Including 5,046 cavalry horses, 6,836 artillery horses, and the wagon teams, the whole number of animals was 20,300. The transport of ten days' forage for these, required about 17,000 animals more. But to these animals must be added those employed in transporting quartermaster's supplies, camp equipage, ambulances, reserve ammunition and baggage. In June previous, in the same General's retreat to Harrison's Landing with about 100,000 men, his carriages and teams, if marching on a single road, would have extended about forty miles. And, in the first years of our late war, the quartermaster's trains alone in our armies averaged one wagon to every twenty-four men.

As to animals, for an army in the field completely equipped, including what is needed for cavalry, artillery and trains, the proportion usually estimated is one horse or mule to every

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two men. This would give a total of 50,000 for an army of 100,000 men. In GRANT'S Virginia campaign in 1864, the proportion was somewhat less than this; but in SHERMAN'S Atlanta campaign, it was considerably more.

2. We may here suggest that the enormous number of draught animals required in our service could be considerably reduced by substituting *light drays* for the high and heavy wagons we have been heretofore using; each of which, over bad roads, requires from four to six mules to drag its weight alone. Another important advantage of these drays would be that they are much sooner loaded and unloaded.

3. It is obvious that *a single road* for the entire supply of a large army would not suffice, as it must soon become choked. Therefore, when its line of supply is not a railway, such an army, as it advances, must either cut additional roads behind it when they do not already exist, or rely, as did GRANT'S army on its march through Mississippi in 1863, for its daily supplies, chiefly on the enemy's country.

4. In view of all this, it is not surprising that transportation constitutes *one of the greatest difficulties* an army commander has to contend with, and one which may, at any time, cause the

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failure of a campaign planned and conducted by the greatest military genius, wielding the most numerous and well disciplined army. NAPOLEON insisted that the chief cause of the disasters of the Grand Army in its retreat from Moscow was the sudden cold of which 30,000 of his horses perished in one night; thus compelling him to leave behind, for want of transportation, a large part of his artillery and of his supplies.

The amount of supplies and of warlike material of every kind that was destroyed by the troops on both sides in our late war, for want of transportation, is absolutely incalculable; supplies, too, often most urgently needed by the troops destroying them.

5. It is easy to perceive that by far the greater part of the *cost* of military operations consists not in the mere subsistence, or in the pay of the troops, but in the expense of the necessary transportation; as for instance, in the case of the late Abyssinian campaign by a small British force, the cost of which is now said to foot up, at the very least, £10,000,000 sterling, or $50,000,000 in gold.

6. Such being the importance of facilities for transportation in military operations, it is obvi-

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ous that *railways*, by their easy, rapid, and cheap conveyance of supplies and of troops, furnish the most powerful asssistance in war. This was first seen in the last Italian war, in which the means of transportation possessed by the Allies gave them a decided advantage over the Austrians. And, in our own late war, railways not only caused an immense saving of expense in the transportation of supplies, but sometimes enabled marches to be made, and strategic operations to be undertaken and successfully accomplished of which military history had as yet furnished no example. The troops of General SHERMAN, for instance, in his Georgia campaign, had no sooner established their bivouacs, than the whistle of the locomotive announced the arrival of their supplies.

In future wars, therefore, lines of operation must usually coincide with the principal railways. This will go very far to simplify the strategic problems presented, both in offensive and defensive war; since, by reducing the number of combinations from which we are to choose, it renders the choice easier; and, at the same time, it enables us to anticipate with more or less certainty, what will be the lines of operation of the enemy.



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The following is an extract from a letter addressed to the author by General HERMANN HAUPT, the distinguished Superintendent of Railways during the campaigns in Virginia, in answer to inquiries touching the capacity of railways for the transportation of troops:

"I regret that I have no notes or documents in my possession by which I can answer when and where the greatest number of troops were concentrated at a given point by rail in twenty-four hours. During the second battle of Bull Run we threw into the field 10,000 men per day, when they were offered for transportation; but this does not measure the capacity of a railroad. The difficulty is in getting the men loaded in proper time and manner, and in avoiding the delays incident to military interference with train arrangements. Even after my authority over the railroads had, by a general order, been declared "supreme," and officers of every rank forbidden to interfere with my arrangements, officers would, nevertheless, sometimes trifle and interfere to such an extent that more time was lost in getting troops into the cars than in transporting them when in.

A rough estimate of the capacity of a double track railroad, fully equipped with cars and en-

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gines, can be readily made. Allow trains of twenty cars to start at intervals of fifteen minutes, each car carrying fifty men. Ninety-six thousand men could be moved in twenty-four hours to a distance of two hundred and fifty miles. The number moved and the distance travelled per day are simply questions of equipment and celerity of handling. Some Colonels could get a regiment into the cars in ten minutes; others would waste half a day, and derange the whole line.

"The capacity of a single track railroad is very much less than that of a double track, and may vary from nothing to three thousand tons per day, according to the greater or less degree of military interference. When officers were allowed to monopolize the telegraph lines, and give orders to conductors of trains in conflict with those received from the Superintendent, a blockade invariably occurred, and it has happened that for days not a wheel could move. When the train dispatcher had the free use of the telegraph, and the Superintendent the control of the trains, three hundred cars or more per day have been sent forward with supplies equivalent to the capacity of three thousand wagons. This was done on the Orange and

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Alexandria Railroad. During the battle of Gettysburg, thirty trains per day were sent over the single track Western Maryland Railroad, which was equipped only for two trains per day; the deficiency of wood was supplied by bringing it ready cut from Alexandria, and water was dipped from ditches on the road side.

"You will perceive how difficult it is to estimate the capacity of a railroad for moving troops, since everything depends upon the management; but well managed, they are invaluable. In the operations against Lee, in Virginia, track was sometimes laid, including grading, at the rate of a mile per day, and cars run to the headquarters of the different corps in their encampments.

"A retreating army aided by a railroad can always escape from its pursuers. One has the use of the road and equipment, the other must rebuild bridges and repair track as it proceeds.

"It is almost impossible to protect an extended line of railroad. A single man, provided with an augur and torpedoes, such as I had constructed during the operations in Virginia, could blow down any bridge of ordinary construction in five minutes. To guard every vulnerable point on an

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extended line, would require a very large force, as small detachmeuts could be readily captured by a roving force, and a line broken at a single point becomes useless."

### IV. REDUCTION OF TRANSPORTATION.

1. Rapid marching is the most important element in the execution of strategic plans; so that the success of military operations depends, in great measure, upon the extent to which the army is stripped of its impedimenta, especially wheel carriages. We will now indicate the principal means of reducing transportation to its *lowest possible minimum.*

2. *Field tents* for the command generally, should not be allowed.

The field tents for one regiment alone require twenty wagons to transport them; and beside these wagons themselves must be reckoned the transportation often required for the forage of the animals which draw them. It is moreover to be observed, that field tents disclose to the enemy both our numbers and our position; that, since the introduction of the shelter tents carried by the men, they are no longer needed; and that experience has shown the superior healthiness of camping without them. The



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injurious effects of wet and cold are in a great degree obviated by making the men sleep in circles round their bivouac fires, with their feet close to the fire.

Nevertheless, as maps and official records and papers must be kept sheltered from the weather, one tent should be allowed for this pupose to each regiment, and one or more tents to each general officer, according to the extent of his command.

3. On the march, the tendency is invariably towards an increase of *baggage*. The cardinal rule, that the baggage must be reduced and kept down to the small practicable limit, should be in all cases rigidly enforced, without regard to official rank. In every great war we find examples of defeat caused by the want of a strict enforcement of this rule. As to this, our own late war is no exception; as, witness the disaster caused at Sabine Cross Roads by the enormous baggage train that was suffered to follow our leading cavalry brigade; a disaster which lost us the campaign. To guard against this evil, is one of the most difficult tasks that devolve upon the General Commanding; one often requiring the exercise of an iron will. The commander should never hesitate, when

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occasion requires, to prohibit all baggage not absolutely indispensable, though, by so doing, he may sacrifice his own personal ease and comfort, as well as that of his officers and men.

A cheerful compliance of the entire command with whatever may be ordered on this head may always be relied on, whenever the General Commanding is seen sharing in the privations of the common soldier; as was strikingly exemplified in SHERMAN'S marches from Chattanooga to Goldsboro. In the Atlanta campaign, our troops marched so lightly that the officers were seen with knapsacks; and the men, besides their ordinary burthen, carried also spades, picks, coffee pots, and kettles; a contrast, indeed, to our lumbering marches of 1861 and 1862. In the march through the Carolinas, no wall tents were allowed; only a few tent flies being permitted for the shelter of staff books and papers; and no trunks, camp cots, or chairs whatever; no exception being made in favor of the Commander himself.

4. As to the carriage of *subsistence*:

(1). When railway transportation can be had, it should be used for dead freight exclusively. Live cattle should always be driven.

(2). In case of emergency, subsistence for ten days, at least, in our service, may be made

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to suffice for twenty days; as the men will be able to live on half rations during that period, usually without any serious loss of strength.

(3.) It is only the surplus over and above what we are able to pack on our baggage animals that should be placed in the wagons.

(4). When the country through which we are to march may be depended upon for meat, and flour or meal, the only supplies we need take along with us are coffee, sugar, and salt, or even coffee and salt alone. To these must be added hard bread, when flour or meal cannot be relied upon.

(5). Transportation may be also reduced by directing the officers to live on the army ration.

(6). We may further diminish the amount of subsistence to be carried, by directing the troops to halt and renew their supplies at such depots as may be on the route. And we may here observe that, in cases of emergency requiring great haste, the officer in charge of a subsistence depot would be justified in loading up the teams with rations and stores, without waiting for the making out of formal requisitions or provision returns.

In our service, the men's haversacks will contain only three days' full rations. But SHER-

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MAN'S army, in marching from Atlanta, carried in their haversacks subsistence enough for five days. Fifteen days' rations in addition were carried in the wagons.

5. As to *forage;* The cavalry men can carry two days' forage on the pommel of their saddles.

For the conveyance of forage, all wagons and pack-horses found, whether belonging to friend or foe, may be pressed into the service, and left behind when no longer needed.

6. When not actually needed for the sick or the wounded, *ambulances* may be used as ammunition wagons.

7. In operations through *a densely wooded country*, the use of many guns will be impractible. This will enable us to effect a considerable reduction of transportation by dispensing with a large part of our artillery, together with the trains it requires.

8. When we are *short* of transportation, we must use what we have for what is the most important; that is, First, for ammunition. Secondly, for clothing, especially shoes. Thirdly, for subsistence. Fourthly, for forage. But when the country will not supply us with provisions, subsistence will come before clothing in the order of relative importance.

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9. A few *examples*, drawn from our late war, may perhaps serve still further to illustrate the subject.

In General A. J. SMITH'S Red River Expedition, in March, 1863, Gen. SHERMAN allowed only two wagons to each regiment. In the same general's venturesome march from Atlanta to Savannah, he dispensed with general supply trains altogether. In lieu of these, there followed behind each regiment one wagon and one ambulance; and behind each brigade, a sufficient number of ammunition and provision wagons, and of ambulances. In case of danger, each army corps was to have its advance, and its rear brigade unincumbered by wheels.

In General ROSECRANS' march from Murfreesboro to Chattanooga in 1863, General SHERIDAN stripped his division of everything not absolutely indispensable, and loaded the wagons and animals thus set free with supplies and with extra provender; so that, after a few days' march, when the supplies of all the other division were completely exhausted, his division had still ten days' forage and provisions on hand.

In February, 1865, the same general marched with a cavalry force of 10,000 men from Win-

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chester up the Shenandoah Valley, with orders to destroy the Virginia Central Railroad, and the James River Canal, capture Lynchburg, if practicable, and then join SHERMAN in North Carolina. His command took with it five days' rations in haversacks, fifteen days' rations of coffee, sugar and salt in wagons, and thirty pounds of forage on each horse. One wagon was allowed to each division headquarters. Beside these, there were eight ambulances, and the ammunition and pontoon trains; but no other vehicles were allowed. There was no lack of supplies during the expedition, and the transportation sufficed for all purposes.

In July, 1864, during SHERMAN'S Atlanta campaign, General ROUSSEAU made an important and successful cavalry raid on JOHNSTON'S communications, from Decatur in Alabama. No vehicle whatever was taken except one ambulance for each regiment. The ammunition and camp utensils were packed on mules. In their haversacks, the men carried fifteen days' rations of coffee, salt, and sugar, five rations of hard bread, and one of bacon. A forage train of corn accompanied the column during the first day's march only, and then returned. The men were allowed no blankets, and no extra clothing but

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one shirt and a pair of socks. But each man carried with him two extra horse shoes fitted to his horse, and nails enough to fasten them with; an excellent precaution on the departure of a cavalry expedition. The command was out thirteen days, and lacked for nothing.

In respect to the problem of supplies, LOGISTICS and STRATEGY are always at swords' points. LOGISTICS calls for a wide circle of operations; STRATEGY succeeds best with a restricted one. LOGISTICS demands many marching columns; STRATEGY uses as few of them as possible. The policy of LOGISTICS is dispersion; that of STRATEGY, concentration. Of the two, LOGISTICS is the more powerful; since the physical nature of things will bend neither to the will nor skill of man.

THE END.

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STATE OF RHODE ISLAND, EXECUTIVE DEPARTMENT,
Providence, Oct. 14, 1866.

*My Dear Sir:* Please accept my thanks for your book on the "Tactical Use of the Three Arms." I have looked over it with great interest, and take pleasure in saying that I regard it as a most useful work, and one destined to take a high stand in military literature. It would not surprise me to hear of its being adopted as a text book at West Point. Truly yours,

(Signed) A. E. BURNSIDE.

Gen. FRANCIS J. LIPPITT.

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LETTER FROM THE DUKE OF CAMBRIDGE.

Horse Guards, 11th May, 1866.

*Sir:* I have received through Mr. Hammond, of the Foreign Office, the copy of a work, entitled "Tactical Use of the Three Arms," by Col. Lippitt, late Second Infantry California Volunteers, which you forwarded for my acceptance, and I have now therefore to request that you will be good enough to take an early opportunity of

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conveying to Col. Lippitt, through Mr. Sumner, the expression of my best thanks for his having presented to me so interesting and useful a book on the subject in which I naturally take very great interest.

I am, sir, yours.

(Signed) GEORGE.

The Hon. Sir F. W. A. Bruce, G. C. B.

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it is written in so concise, lucid, and entertaining a style, that while it is full of instruction to the professional student of the science and the art of war, it is also deeply interesting to the general reader." "The non-professional reader cannot but be struck with the wonderful condensation and terseness of the work, while the style is never bald or dry."—*Providence Journal.*

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"In a former number of the *Nation* we bore our testimony to the excellence of the "Treatise on Entrenchments." What we said of that book might be repeated of this, but with additions, viz: that the subjects discussed are judiciously chosen, and that the discussion of each is well considered, well reasoned, and well put. There is not a word too much, and, we are inclined to think, not a word too little. Most of us hope that there will not be another war in America, during the present century at least, but there may be, and it is a wise maxim to prepare for war in time of peace. Our country now numbers many men in civil life to whom the art of war has become an interesting study, and our regular army, though not large, has a *cadre* large enough to include many officers who must desire to learn what they do not know, or to refresh their recollection of what they have learned and forgotten. To all such we cordially commend the book. They will find it thoroughly business-like. It is all to the point; and yet the illustrations are so well chosen, and so generally taken either from our recent war or from Napoleon's campaigns, that it is as far as possible from being dull. The general reader with a taste for military subjects, will find it agreeable reading, and will be probably much interested to find how simple is the explanation of many of the successes and disasters of our war, and how directly traceable they were to the observance or violation of some well settled military principle. The author is eminently successful in perceiving the principles involved in actual operations, and he points the moral to be drawn from such of them as he refers to in a way that readily fixes it in the memory."

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"Gen. Lippitt has succeeded in making an interesting as well as an instructive book, for he not only explains to the reader what is necessary to do when compelled to resort to one of the special operations of war for attack or defence, but shows what was done under similar circumstances by the best generals in the war of the rebellion, and by Napoleon and other great captains. Diagrams are given wherever they are necessary to illustrate the text or can be used to advantage."

*From the London Saturday Review.*

"The directions given in each case are brief, clear, and intelligible, and the reasons for them are distinctly and correctly stated, with occasional references in which their value has been strikingly exemplified. The language is free from technicality, and the style terse, simple and direct."

*From the United Service Gazette.*

We publish this week, and shall continue to do so as space may permit, some extracts from an exceedingly valuable little book, *The Special Operations of War*, by General F. J. Lippitt, of the United States service. The volume is full of practical hints, illustrated by well chosen instances from our own, French and American wars, and is one of high interest to our readers, for whom it presents, in an easy popular style, a condensed amount of useful information, which it would necessitate long and laborious study of more pretentious works to acquire."

The Boston *Transcript* calls it "a very interesting volume, clearly and intelligently written."

Lieut. Col. J. Albert Monroe, late Chief of Artillery of the Ninth Corps, speaking of this and the other two treatises then published, writes as follows:

Providence, R. I., May 18, 1868.

"I cannot but regret that they were not issued in the early part of the late war, for their practical teachings

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and wholesome suggestions would have been of incalculable value to both our volunteer and regular army."

*From the New York Tribune.*

"The *Special Operations of War* by FRANCIS J. LIPPITT, is the work of an officer in the U. S. Volunteer service, who has already gained honorable distinction as an author by his previous writings on different branches of military science. The present volume, among other topics, treats of the forcing and defence of defiles and rivers, the attack and defence of open towns and villages, the conduct of detachments for special purposes, and tactical operations in sieges. In the illustration of the principles set forth by the writer, he makes frequent and important use of the movements in the late war of the rebellion, as well as of operations in the wars of Napoleon and other European campaigns. The work thus assumes in some sense, the character of a historical commentary on celebrated military actions, and becomes of interest to the general reader, as well as to the student of the art of war. It is recommended by the lucidity and terseness of its expositions, and the facility with which it seizes the essential point of a question, without burdening the discussion with superfluous details. The writer has evidently aimed at imparting useful information rather than at swelling the size of his book—an example of common sense which appeals to the common sense of his readers."

Letter from Major J. H. WHITTLESEY, U. S. Army, Professor of Military Sciences in Cornell University:

CORNELL UNIVERSITY, Ithaca, N. Y., Dec. 28, 1868.

GEN. F. J. LIPPITT:

*My Dear Sir:* Accept my thanks for your publications upon military science. I have perused them carefully and believe them admirably adapted to the end in view, viz: the diffusion of military knowledge among officers of the National militia, which, under institutions like ours, must ever be our chief reliance in war. They

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will form a valuable link in the chain of effort now being made to establish in the country a comprehensive system of military instruction based upon existing educational agencies, and urged upon national attention by the fearful lessons of the recent past.

I am, sir, very respectfully yours,
J. H. WHITTLESEY.

The usual discount made to the trade.

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